37146B

LeoPC1
User Manual

User Manual
Software Version 3.1

Manual 37146B

WARNING

Read this entire manual and all other publications pertaining to the work to be performed before installing, operating, or servicing this equipment. Practice all plant and safety instructions and precautions. Failure to follow instructions can cause personal injury and/or property damage.

Any unauthorized modifications to or use of this equipment outside its specified mechanical, electrical, or other operating limits may cause personal injury and/or property damage, including damage to the equipment. Any such unauthorized modifications: (i) constitute "misuse" and/or "negligence" within the meaning of the product warranty thereby excluding warranty coverage for any resulting damage, and (ii) invalidate product certifications or listings.

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Important definitions

WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation that, if not avoided, could result in damage to equipment.

NOTE

Provides other helpful information that does not fall under the warning or caution categories.

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Chapter 1.
General Information

General Points

LeoPC1 provides you with a Windows-based program for your PC or laptop, that offers support for the handling of selected measuring instruments as well as open-loop and closed-loop control devices. The following **functions** are supported they are installed on the device as well:

Display	of measured variables or the logical statuses of your plant
Configuration	of the configurable devices used in your plant
Standard values	of your devices can be stored for reloading or transferring
Remote control	of the controllable devices used in your plant
Logging	of selected data and measured values or events of your plant
Events	of the corresponding devices can be read out and printed
Language	management and loading for the display of your adaptable devices
Alarm	logging, management and preparation for your plant

The devices differ in level of support:

Full	support of all functions
Limited	support of the functionality
No	device not supported

The degree of **support** depends on the product the year of manufacture, and what external devices are to be used with the product.

NOTE

Please refer to the corresponding documentation for the specific devices to see what support utilities your devices permits in terms of operator control with the LeoPC1.

LeoPC1 utilizes permits management of access rights. These access rights are graduated in the degree of access to the programming. It is differentiated between:

Administrative	access to all functions and settings is permitted
Level 2 authorized	access to all functions permitted
Level 1 authorized	access to data logging functions only
Access denied	access to all functions and settings are blocked

Should a component described in this manual not be available, please contact your system administrator. The system administrator will be able to provide you with the advice you require.

The LeoPC1 is obtainable in the following **version:**

Full version LeoPC1 with full functionality:

- CAN bus driver (allows all functions via a CAN card connection)
- Gateway RS-232 driver (allows all functions via a Gateway connection)
- Modem driver (allows all functions via a modem connection)
- Direct driver (only for configuration via the direct connection)
- Demo driver (for demonstration purposes without a connected device)

Helpful Information about the Manual

This manual provides for a **first-time users** explanatory introductions to:

Commissioning:	Installation, uninstalling, and general configuration
Properties:	of all functions and their application
Communication Connection:	Drivers and communication utilities of the LeoPC1.

The individual **sections** are structured so that you are provided with each of the following for each program segment:

Introduction	to specific functions and their significance
Explanation	of the individual components in terms of their functionality
Description	of the procedure, broken down into by individual steps.

Provided in addition with the descriptions of the procedure are:

Illustrations	that permit cross-referencing to the relevant screens and menus of the LeoPC1.

NOTE

Information captions contain general, important items of information, additional specifications and/or references to more extensive sources of information.

Comments	additional explanatory comments are printed in “( )”

Should you have more detailed questions regarding the LeoPC1 that have not been answered in this reference manual, please contact our support team.

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Chapter 2.
Commissioning

The following version of the LeoPC1 is available:

The full version	comprises the following components: Application (minimum requirement) Demo driver Direct driver IXXAT VCI2 – CAN bus-driver Modem driver Gateway RS-232 driver

LeoPC1 can be easily installed from your CD-ROM drive. Follow the instructions and prompts given during installation. Some customization to individual installations is possible during the installation process. A detailed explanation of the installation and configuration process is located in the following section.

Installation

During installation numerous components are installed in your PC due to the multiple versions of LeoPC1 with differing functionalities. The differences in the functionality of the LeoPC1 program are dependent upon the version of the program that has been selected for installation. If there are controllers that have been configured with LeoPC1 v2.x, they cannot be reconfigured with later versions of LeoPC1. STD files created by LeoPC1 v2.x are not compatible with LeoPC1 v3.x and higher.

This version will be installed in a different directory by default and can be launched by a different entry in the start menu than version 3.0 or any older version of LeoPC1.
Versions 2.x can not be run after setting up a new version. Due to this it is recommended to uninstall any version 2.x of LeoPC1 before setting up this new version.
If an IXXAT VCI driver version lower than 2.16 is installed on your PC/laptop, e.g. it was installed with LeoPC1 version 2.x or 3.0, you are recommended to follow the instructions given from IXXAT.de to remove the old VCI version with their tool vciclean.exe
You do not need to install the IXXAT VCI driver, it will be done with the LeoPC1 installation.

Components of the Installation

The full version enables you to perform data transfers for the purpose of display, configuration and control via a special CAN bus, modem, RS-232, or a direct connection.

NOTE

Locate the version of LeoPC1 being installed. This information can be obtained from the title page of the CD-ROM or during the installation process.

For detailed information on the relevant files to be installed and in which directory they are to be found is located in the annex of this manual.

The following **files** and **sub directories will** be found in the main program menu directory:

Files	System files “*.*”, configuration files “*.cfg”, event memory files “*.dat”, and files for external tools.
ALARMS	For daily alarm protocols “01.alm” to “31.alm”
DL	For temporary data-logging files “DLx.tmp”, where x stands for the device number
LNG	For the load language files “*.lng”
PICTURES	For the bit map layout files “*.bmp”
STD	For the standard value files “*.std”
TOOLS	For the assembler “*.asm” and option files “*.opt” used with the configuration files

NOTE

Temporary files are created for each connected, device that are used to display the configured values after exiting or in the event of an application crash for restarting the LeoPC1. These files are lost when a new configuration is started.

LeoPC1 can be installed on all Microsoft Windows©-systems. When installing LeoPC1 the following requirements must be followed:

WinNT/2000/XP	Administration rights for the computer to have the program installed. The operator for the program will require main user rights to the computer at a minimum.

The required hard drive space for installing LeoPC1 is dependent on the application modules of the version to be installed:
The program will require between 20 and 60 MB of storage space.

NOTE

These specifications are minimum specifications and relate to the LeoPC1 itself.

This specification does not account for storage space that will be required by the configuration, data logging, alarm management files and all other files created for the use of this software tool.

Procedure for Installation

NOTE

The beginning of the software installation is dependent upon the source for the LeoPC1 program. If a dialog window does not initiate from the installation program, follow the instructions below.

Ensure that all setup files are in one directory prior to starting installation.

The number of files that must be located depends on the version of LeoPC1. The following files must be located:

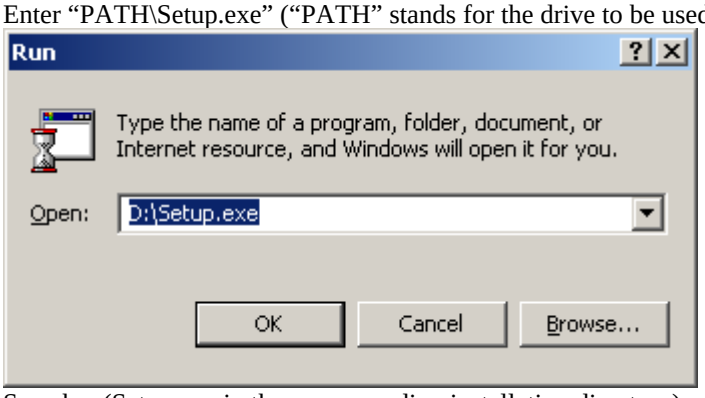
- **LeoPC1.exe**

or:

- **Install.ini, ReadMe.txt**
- **Setup.exe and other Setup.W0n (‚n’ stands for numbers from 2 to 4)**
- **Package1.exe and may be other package files**
- **Vci2.xx.exe (‚xx’ stands for the current version of the IXXAT driver).**

To start installation: Insert the CD-ROM into the CD-Rom drive
Locate and (double) click on: Setup.exe
or Click on the Start button for Windows
Move the cursor up to Run and click on it (the Run dialog is opened)
and Enter “PATH\Setup.exe” (“PATH” stands for the drive to be used)

Figure 2.1
Start installation



or Search... (Setup.exe in the corresponding installation directory)
OK

NOTE

The installation is initiated by setup.exe or LeoPC1.exe depending on the version of the software.

Continue with the installation by following the prompts and instructions given in the dialog windows. There may be differences in the dialog windows that are dependent upon the software version being installed.

The following dialog windows will guide you through the setup procedure. By clicking on the “Next” button, the program will advance to the next dialog window. It is strongly recommended to read all of the dialog windows when performing the installation. If any it is desired to make changes to the setup, it is possible to return to all previously displayed screen by clicking on the “Back” button.

- Welcome (greeting and notices)
- ReadMe file (important installation information)
- Choose destination location (please select your directory here)

To select a directory: C:\Program File\Woodward\LeoPC1 (represents the standard setting, where the main directory of the LeoPC1 will be installed)
or Select your desired path or directory

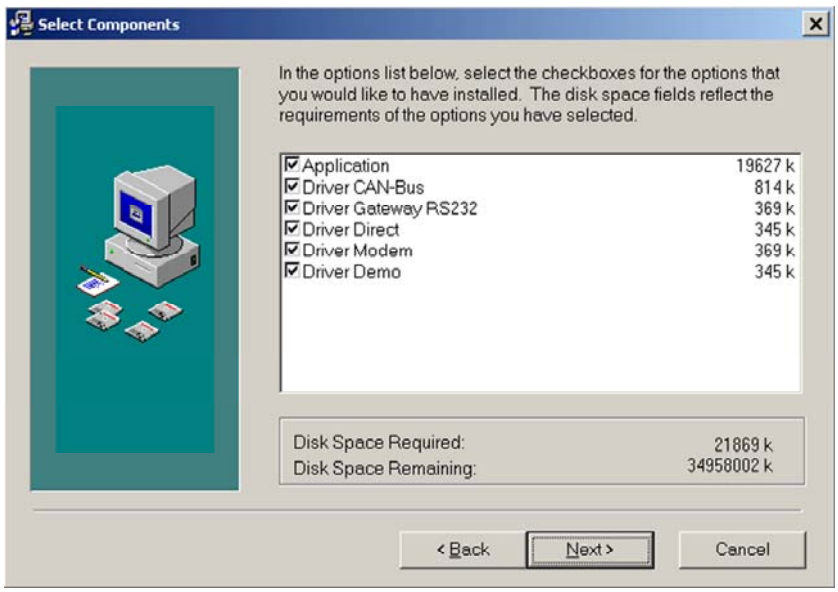
NOTE

You may install LeoPC1 to any desired location in your computer with the “Choose Destination Location” dialog window. It is recommended to utilize the default location. All sub-directories of LeoPC1 will be installed in the directory selected during this step.

After LeoPC1 has been installed on the computer do not alter or move individual software tool components or entire directories. Doing so may result in errors or the program failing to operate properly.

Select components (uncheck the non-required components)

Figure 2.2
Select components


Select Components
In the options list below, select the checkboxes for the options that you would like to have installed. The disk space fields reflect the requirements of the options you have selected.
Application 19627 k
Driver CAN-Bus 814 k
Driver Gateway RS232 369 k
Driver Direct 345 k
Driver Modem 369 k
Driver Demo 345 k
Disk Space Required: 21869 k
Disk Space Remaining: 34958002 k
< Back
Next >
Cancel

NOTE

If required, any components that were not installed in the initial installation may be installed at a later date by simply repeating the installation procedure and selecting the desired components to be installed.

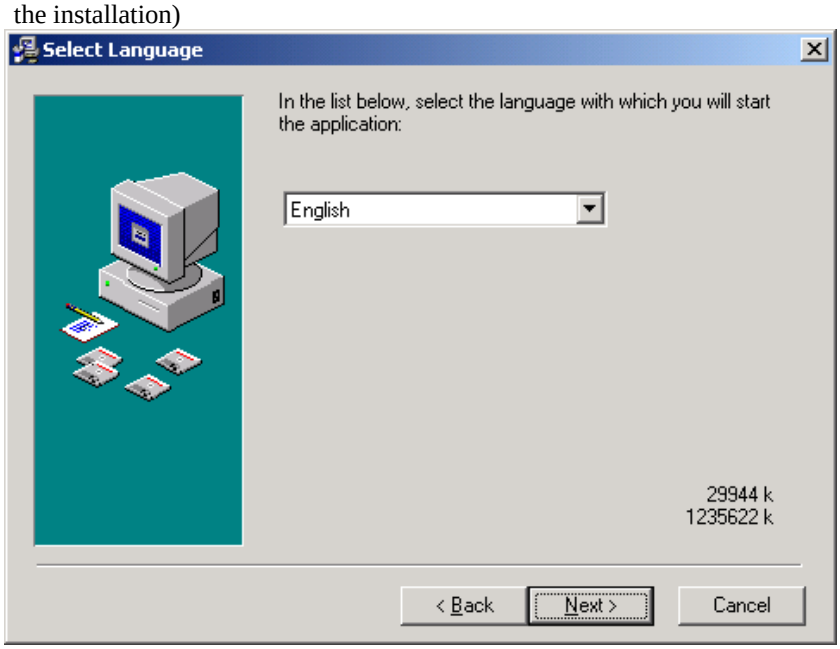
If another CAN driver is installed on your system, a notice will be displayed. It is possible to continue the setup and use the old driver version with limited compatibility for the latest CAN-Interfaces.

The recommended to de-install the old configuration and driver of your CAN bus Interfaces according to the instructions of IXXAT http://www.ixxat.de before starting the setup program. New CAN bus drivers will be installed by the setup.

After LeoPC1 has completed its installation procedure, the option to install the IXXAT-VCI-driver on the PC/laptop will be given.

Select language (Select the language with which the LeoPC1 is to be started initially after the installation)

Figure 2.3
Select language



Start installation To start installation, click the “Next” button.
File installing A progress bar will be displayed while the file is installing
Plant configuration Please wait... (interim information)

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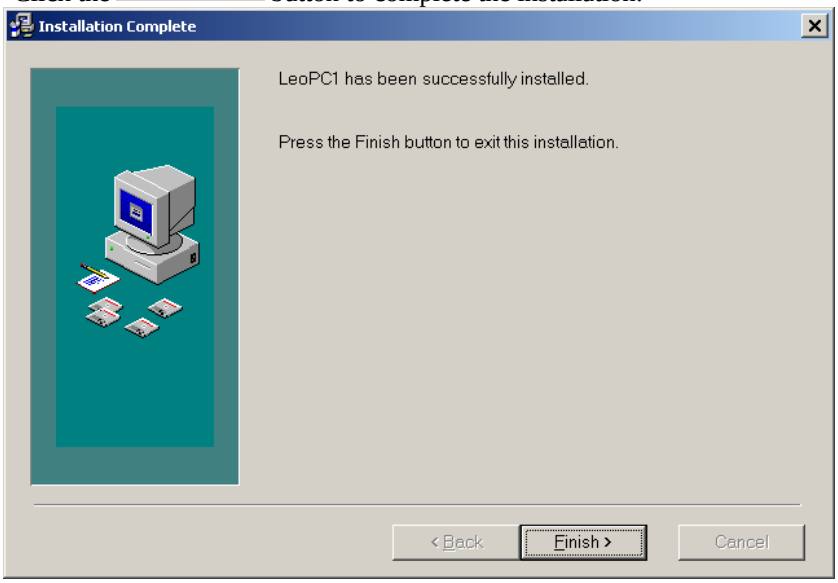
Setup – IXXAT VCI V2.16 for Windows ...

The VCI driver for IXXAT CAN-Interfaces may now be installed. If this message is not displayed, the appropriate drivers are already installed or the VCI version 1 is already installed.

Finish installation

Click the Finish button to complete the installation.

Figure 2.4
Finish installation


Installation Complete
LeoPC1 has been successfully installed.
Press the Finish button to exit this installation.
< Back
Finish >
Cancel

NOTE

It is necessary to restart the PC/laptop after the completion of the installation to ensure the operating software is stored and all functions and links are properly enabled.

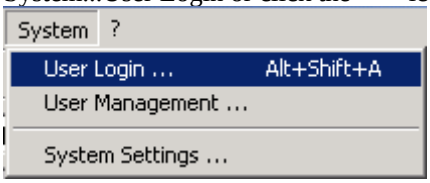
After rebooting the PC/laptop, LeoPC1 may be started by following the log on procedure below:

To start the application: Click on:
Start..Programs..Woodward.. LeoPC1.. LeoPC1
or Via Windows-Explorer start the “main.exe” in the selected main directory
or Start a “*.cfg” file in the selected main directory

To log on: Click on:

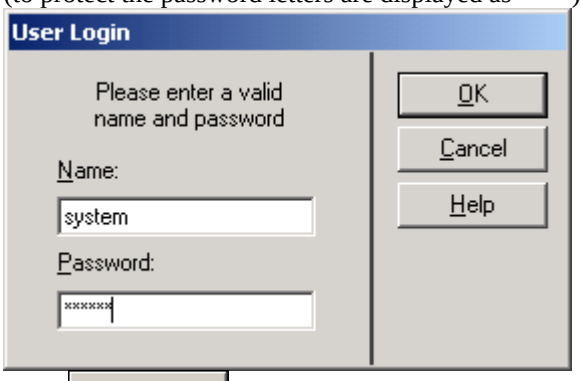
System...User Login or click the icon.

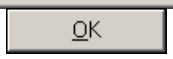
Figure 2.5
Open User Login



In the “Name” box type the user name as “system”.
In the “Password” box type in the password as “system”
(to protect the password letters are displayed as ****).

Figure 2.6
User Login



Click  to gain access.

NOTE

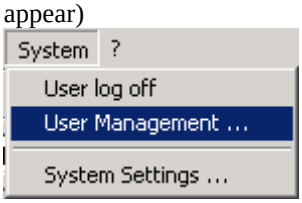
It is recommended that the system administrator change the password immediately after logging on the first time. Make note of the password issued to you, as most functions of LeoPC1 require this password for access.

If you attempt to utilize LeoPC1 prior to logging on, you will be prompted that logging on is required. By clicking on the “Yes” button the User Login dialog window will be displayed.

Defining the system administrator: After logging in to LeoPC1, click on:

System...User management... (the Users Management dialog window will appear)

Figure 2.7
Open User Management



Editing boxes At the bottom of the dialog window is the “New user” box. Type in the desired user ID

and Type the desired password into the “Password” box

and Type the desired password again into the “Repeat” box

To enable the new user ID and password click on .

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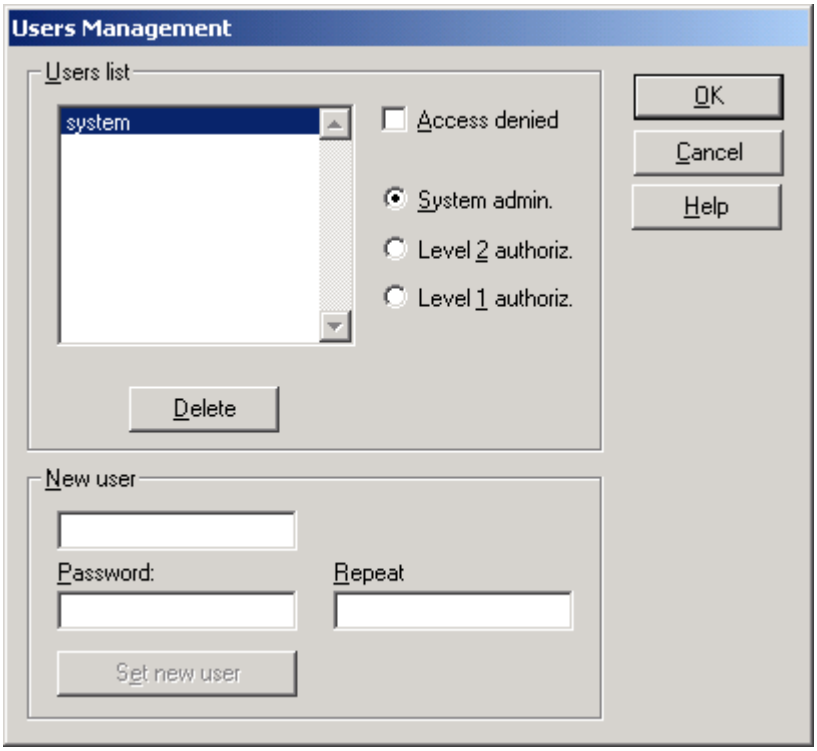
Option: Setting the level of access for users: by clicking and highlighting a user ID the level of access may be changed. The default level of access is Level 1 authorized. Click on the desired access level and enable it by clicking OK.

Deleting a user ID: By clicking on a user ID and highlighting it then clicking the "Delete" button a user ID is deleted from the Users Manager. Before deleting the default user ID and password system, it is strongly recommended that the new system administrator log off and back on to verify that the new ID and password function properly. After this has been verified, delete the default user ID "system" and password for security purposes. It is required to click OK to enable any changes made in this dialog window.

Figure 2.8
User Management



Procedure for De-installing

During installation of the LeoPC1, a tool is also set up for de-installing this program. If you wish to remove LeoPC1 version on your PC, please use this tool only.

To start uninstalling: The pathway to unwise.exe if the default installation was utilized is typically C:\Program Files\Woodward\LeoPC1\unwise.exe.
(Double) click on: Unwise.exe
or Start\Run\unwise.exe
or Search\unwise.exe

NOTE

**Please continue to follow the directions of the de-installer program, which will guide you through the Unwise dialogs, if you confirm with

. When the de-installer program, Unwise.exe, has been started, you will be prompted to make decisions on the de-installation process. Confirm your choices by clicking on the "Next" button.**

For easy and quick uninstalling, use the option "Automatic" and confirm by clicking on "Next".

The option "Custom" requires extensive administrative knowledge and is not covered by this manual.

If the application is to be de-installed and the configuration files (*.cfg and *.asm) or other files generated during use of the application need to be kept, the configuration files will need to be copied to another directory prior to uninstalling the application. If the application is uninstalled prior to transferring these files, they may no longer be available after de-installing.

Generally the file folder for LeoPC1 and individual files stored in it are not affected by the de-installation. The file folder may be deleted by following the directions below if the default installation was chosen.

To delete main directory: Click on:
My Computer... Program Files... Woodward...
and Highlight the LeoPC1 file folder
and Delete the file folder

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Loading a Plant Configuration

NOTE

Open your plant configuration from the actual application.

A plant configuration must be opened from the correct application file (.asm). LeoPC1 must be started and the correct application file opened to begin configuring a plant.**

Various plant configurations can be loaded with LeoPC1. The plant configuration functions and layout are dependent on the following::

Version of the LeoPC1 being used
Devices that are to be communicated with
Tasks that to be assigned to devices
Requirements that the plant must meet

Basically it can be differentiated between:

- Demo configuration
- Direct parametric configuration
- Display configuration
- Configuration and display configuration

NOTE

Due to the numerous control units and possible combinations of these units, it is impossible to cover every plant configuration. Operator control will be discussed only in general terms because of this.

For further information on and examples of configurations, please refer to the following sections:

Fehler! Verweisquelle konnte nicht gefunden werden.**"General Configuration" after page 22**
"Communication and Connection" after page 69

and the corresponding sections of the manuals for your specific control unit

Some **prerequisites** have to be met before you can load your plant configuration (provided that it has not been done already by installation)

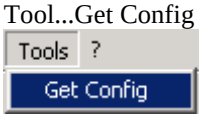
To copy files: Use, for example, Windows-Explorer for this step:
Copy the corresponding CFG configuration file (*.cfg) to the main menu in the LeoPC1 file folder
Pathway C:\Program Files\Woodward\LeoPC1
and Copy the pertinent ASM configuration file (*.asm, if necessary *.opt) to the sub-directory TOOLS in the LeoPC1 file folder
Pathway C:\Program\Woodward\LeoPC1\Tools
Copy and paste.

NOTE

In some versions of LeoPC1 (e.g. LeoPC1.cfg), it is possible to copy and paste configuration files from a floppy disk or a CD-ROM. If too many sub-directories are transferred at one time by this method, the possibility of errors occurring in the files is greatly increased.

To use copy tools: Click on
Tool...Get Config

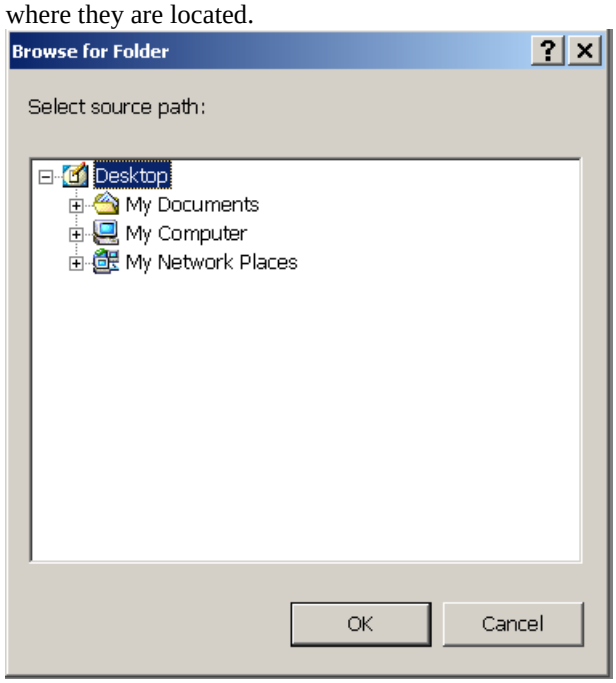
Figure 2.9
Open Tools menu



and Follow the directions in the dialog window that opens up

and Select the desired configuration files from the disk, CD ROM, or file folder where they are located.

Figure 2.10
Search directory



and Start the copy operation. A dialog window will open displaying the status of the files that were transferred. This may be acknowledged by clicking

To connect devices For communication with the desired connection type (Depending on your device and plant configuration):

Demo connection	Connection to a device is necessary
Direct connection	COM port of the PC > Direct configuration cable > RJ45 port of the device
Gateway connection	COM port of the PC <> Gateway RS-232 <> Device.
Modem connection	COM port of the PC <> modem <> Telephone network <> Gateway <> Device
CAN bus connection	CAN card COM port of the PC <> Adapter cable <> Device

NOTE

Ensure that the COM port to be used for configuration has not been assigned to more than one function.

Read the documentation of the device to be configured prior to beginning the configuration of that unit.

All control units will require individual tuning to gain optimum performance within the plant.

Some older control units require the configuration interface to be activated before configuration can be performed.

© Woodward

To activate devices:
Configuration method

Turn power on to all devices to be configured.

Direct connection: On devices with a display set the direct configuration screen to "**ON"**

Gateway and modem connection: On devices with display set the direct configuration screen to "**OFF"** (the CAN bus interface is disabled when the direct configuration mode is enabled)

CAN bus connection: On devices with displays set the direct configuration screen to "**OFF"** (the CAN bus interface is disabled when the direct configuration mode is enabled)

To load a configuration:

Click on:
Start...Program...Woodward...LeoPC1...LeoPC1 (application is started)
File...Open…(the "Open" file dialog window is opened)

Or click the icon.

and: Select the *.cfg file that has been copied to the main directory

or: Start the *.cfg file directly from the selected mains directory

Configuration method

Direct connection: Only used for configuration of the device. Display of the measured data may not be possible.

Gateway, modem or CAN bus connection: The device may be configured while measured data from the generator/ plant is displayed. Extreme caution must be exercised when configuring through this method.

To log on:

Click on:
System...User Login...(Only personnel with system administrator privileges may configure control units)

Or click the icon.

NOTE

If no changes have been made to the user/password settings, the user ID and password for the system administrator will still be set as the default:

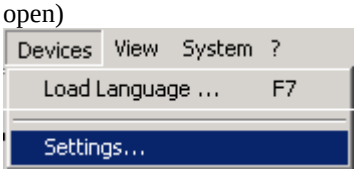
Name = "system"

Password = "system"

To select application modules:

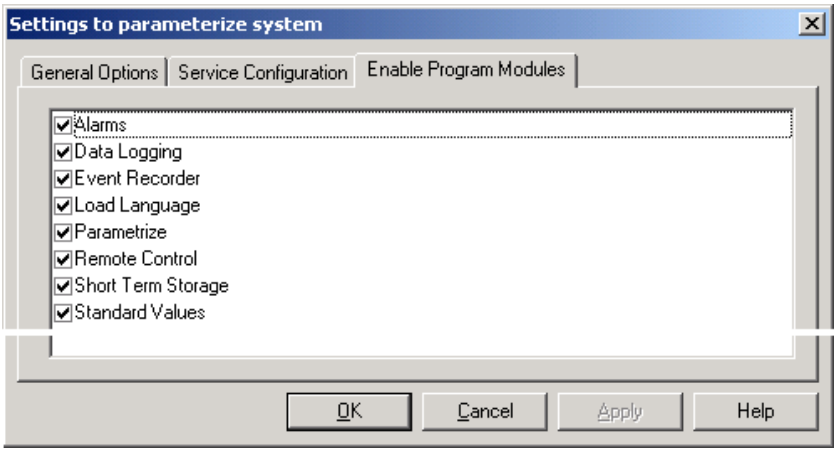
Click on:
Devices...Settings... (Settings to parameterize system dialog window will open)

Figure 2.11
Open Device Settings



Select Enable Program Modules (changes the available configuration modules)

Figure 2.12
Enable Program Modules



and
Direct configuration

Enable the modules that will be required for the connection and tasks:
The modules “Parameterize” and “standard values” are sufficient to configure most control units generally.

Gateway, modem or
CAN bus connection

All modules may be used for configuring control units. Select the modules that will be needed according to your requirements

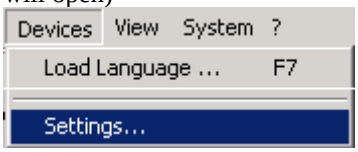
Click on OK to save settings.

To select the communication type:

Click on:

Devices...Settings... (The “Settings to parameterize system” dialog window will open)

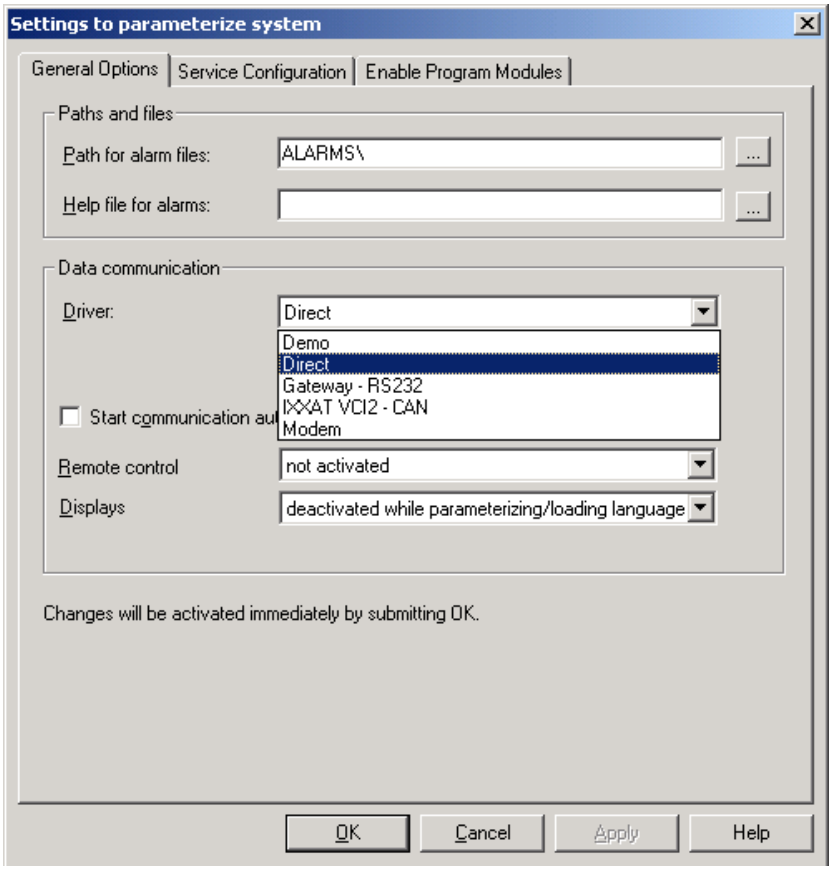
Figure 2.13
Open Device Settings



Select General Options

 © Woodward

Figure 2.14
General Options



and Select the method of configuration to be used in the Data communication Driver box from the following:

Direct configuration Driver: “Direct”

Gateway connection Driver: “Gateway RS-232”

modem connection Driver: “Modem”

CAN bus connection Driver: “IXXAT VCI2 – CAN”

Remote control Set the remaining dialog boxes as follows:

Displays “Not active”

“Deactivate while parameterizing/load language”

or Set according to requirements

NOTE

Refer to the product manual when selecting the baud rate for communications.

To connect: Click on:
Communication...Connect (The communication link between the PC/laptop and the device is established)

Or click the icon.

General Configuration

LeoPC1 may be configured in several different ways. For this purpose it is differentiated between:

General configuration Adaptation of the system settings and the device settings to your plant
Special configuration Creation of the *.cfg files and *.asm configuration files

NOTE

Special configuration is generally not necessary. Your supplier should have already performed all necessary adaptations to your plant and devices.

This special configuration is described in more detail in a separate manual 37164.

Components of the General Configuration

NOTE

Ensure that the general configuration described below can only be accessed/performed by experienced personnel through the use of the System administrator. Failure to do so may result in these settings will interfering with your PC operating system, the hardware configurations, and/or the plant configuration.

The components of the general configuration are subdivided into three areas:

System Configurations

Log on /log off user	Dialog window for logging on/off
User management	List of the user names, passwords, and access rights
System settings	Language settings and logging parameters Path variables for CFG-files

Plant Configurations

General options	Definition of the alarm path and of the alarm help file
and	definition of the data communication and connection settings
Service Configuration	Definition of parameters for the data buffer etc.
Enable program modules	Definition of the enable/disabled application modules

View Configurations

Symbol bars and settings	Definition of the LeoPC1 window layout

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Procedure for General Configuration

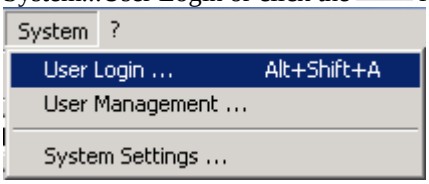
System Configurations

User

To log on: Click on:

System...User Login or click the icon.

Figure 2.15
Open User Login



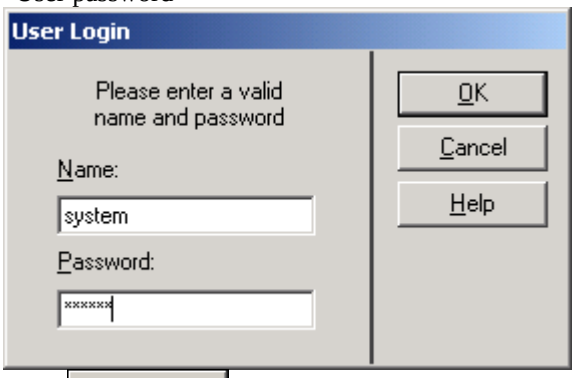
Editing boxes Name: “system” (visible as system), if the factory default has not been changed

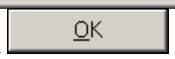
or “User ID” (with administrative rights)

and Password: “system” (visible as ******), if the factory default has not been changed

or “User password”

Figure 2.16
User Login

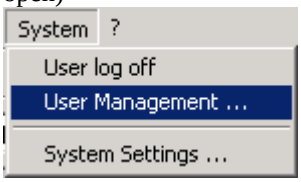


Click 

To open user management Click on:

System...User management... (The user management dialog window will open)

Figure 2.17
Open User Management



To set up a user Open user management and click on:

Editing boxes: “New user” and enter the desired user ID

and “Password” and enter the desired user password

and “Repeat” and verify the desired user password

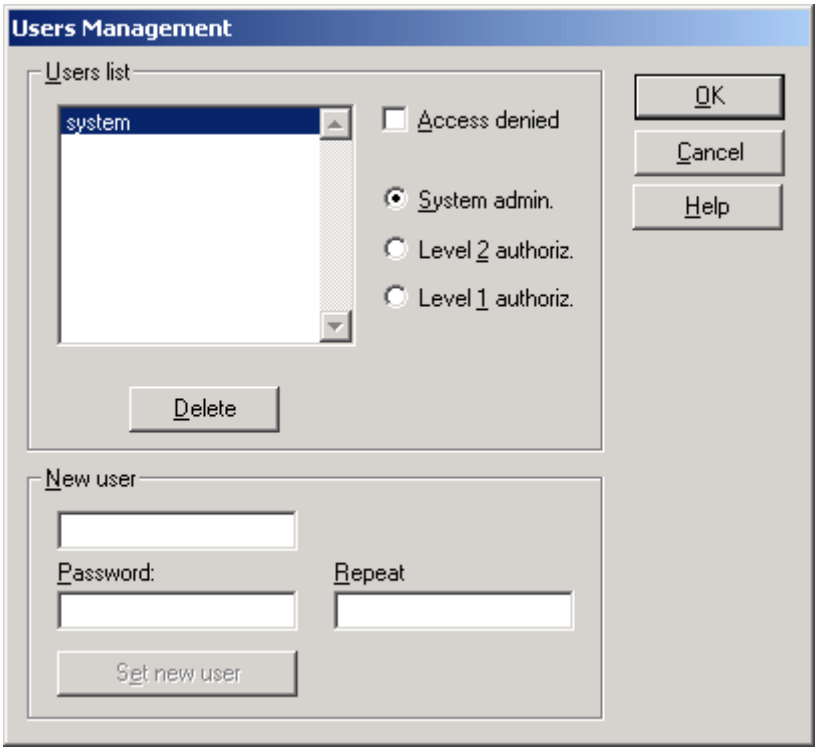
Click

and the new user will appear in the Users List

Option: Highlight the desired user ID and click on ”System admin.” to assign full access rights to this user or the appropriate level of access at this time.

Confirm all changes made to users and access rights by clicking on

Figure 2.18
User Management



NOTE

A user ID can only be assigned one password and level of access at a time.

A user ID should be assigned the appropriate level of access when it is created. Only the highlighted user ID can have any changes made to the level of access or status. It is not possible to edit a password for an active user ID. A user ID that has been deleted cannot be edited or logged onto the system. User ID's that have been deleted can be re-entered as a new user ID if it is desired to use again.

To manage a user: Open Users manager and click on:
Desired user name (scroll menu with all defined users)
Desired options: "Access denied" (denies access to a user)
"System admin." (Permits full access to system functions and settings)
or "Level 2 authoriz." (Permits access to system functions only)
or "Level 1 authoriz." (Permits access to data logging only)
Verify all changes by clicking the "OK" button.

To delete a user Open user management and click on:
Desired user name (scroll menu with all defined users)
Delete (The user is removed from the scroll menu)

NOTE

Only one user can be logged onto LeoPC1 at any one time. If a user is logged on, he/she must log off to permit another user to log on to the application. The user ID of the signed on user is displayed at the bottom right corner of the LeoPC1 window. The user may be logged off by clicking on the icon or using the "System" button in the tool bar and clicking on "Log off user"

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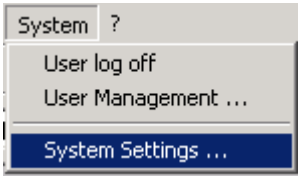
System

To open system settings

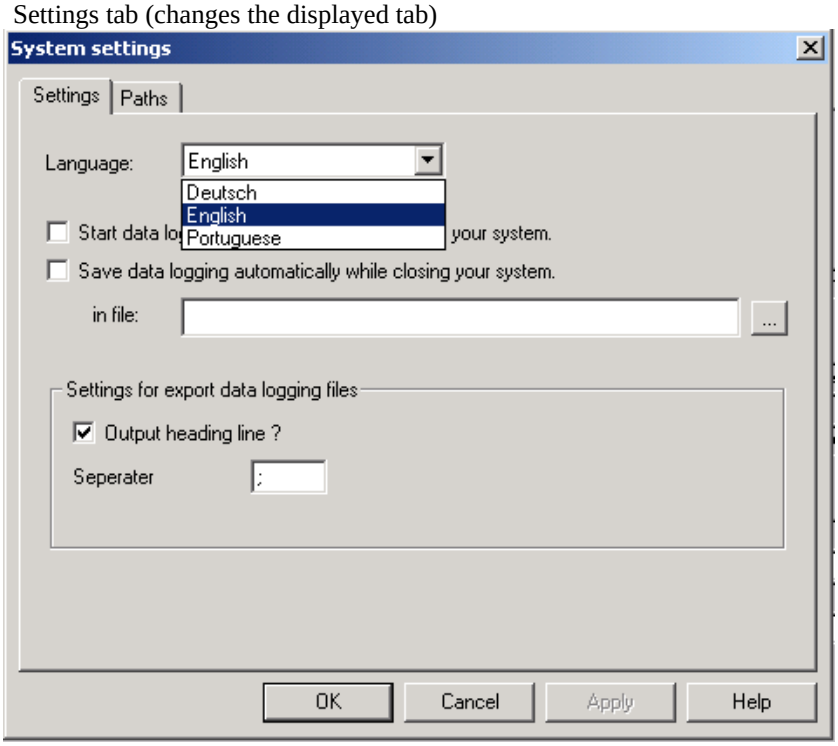
Select “System” from the Command menu, “System Settings…” from the drop down menu (the “System settings” dialog window will open), and click on:

Figure 2.19
Open System Settings



Settings tab (changes the displayed tab)

Figure 2.20
System Settings



To define the language

Select “System” from the Command menu, “System Settings…” from the drop down menu (the “System settings” dialog window will open), and click on:
Language: (pull down menu displays all available languages)

NOTE

The language defined in this parameter has no effect on a control unit that may be configured in a different language.

Example: If a control unit is configured in English and German is the language selected for this parameter, the control unit will continue to display all parameters in English while the same parameters will be displayed in the LeoPC1 program in German.

To define data logging: Select “System” from the Command menu, “System Settings…” from the drop down menu (the “System settings” dialog window will open), and click on:
Start data logging automatically upon loading the plant configuration
Save data logging automatically upon closing the plant configuration

activate: Enter a check mark in the box next to the desired data logging option

deactivate: Remove the check mark in the box next to the data logging option to be de-activated

Saving data: Click on the icon to open the “Save As“ dialog window, type in the name of the file for the data, and select the file to save the data in. After a file name has been selected the Save button has been clicked, the pathway for the file will be displayed in text box. The OK at the bottom of the System settings dialog window must be clicked to accept any changes made to these settings.

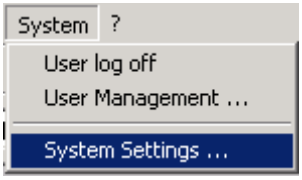
NOTE

When saving data logging files, they must end in ".llo". All data logging files must use the "LLO" format.

To define data export: Select “System” from the Command menu, “System Settings…” from the drop down menu (the “System settings” dialog window will open), and click on:
Under “setting for export data logging files” enter a check mark in the box next to “Output header line?”
Enter separator character (it is recommended that a semicolon “;” be used).

To open system settings Select “System” from the Command menu, “System Settings…” from the drop down menu (the “System settings” dialog window will open), and click on:

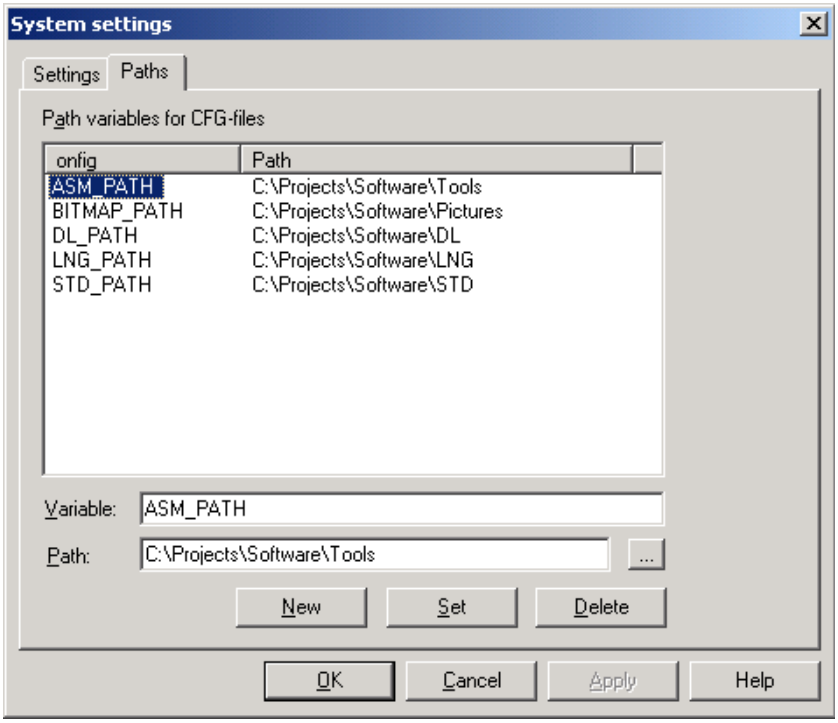
Figure 2.21
Open System Settings



Paths tab (changes the displayed tab)

© Woodward

Figure 2.22
Path variables for CFG files



NOTE

As newly defined variables require an equivalent in the configuration file, it is not recommended adding or removing any path variables, but merely adapting the directories.

Example: If the configuration files were stored in a common file on a network so that they may be accessed from multiple computers instead of being stored on an individual computer, the pathway to the necessary CFG files would be modified here for the computer that will require access to these files.

To define paths: Open the System settings dialog window and click on:
Paths (changes the displayed page)
Desired path variable for CFG file (selected variable is entered into the text box for editing)

Editing box: In the “Path:” text box enter desired path

or: Click on the ... icon to open the “'Select Path” dialog window and modify the pathway to the desired path

and: Click Set to enable the new path (the path is relocated to the path variable)

To define the path variable Click on:

Editing boxes: Click in the “Variable:” text box and enter the appropriate designation of the CFG file
Click in the “Path:” text box and enter desired path

or: Click on the ... icon to open the “Select Path” dialog window and enter the desired path

and: Click New to enter the new path variable (the path variable is set and appears in the list box)

Plant Configurations

General settings

NOTE

Any changes made to the General Options will take effect immediately after the dialog window is closed.

To open general settings

Select “Devices” from the Command menu, “Settings…” from the drop down menu (the “Settings to parameterize system” widow will open):

Figure 2.23
Open Device Settings

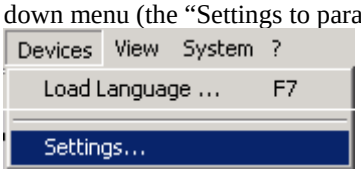
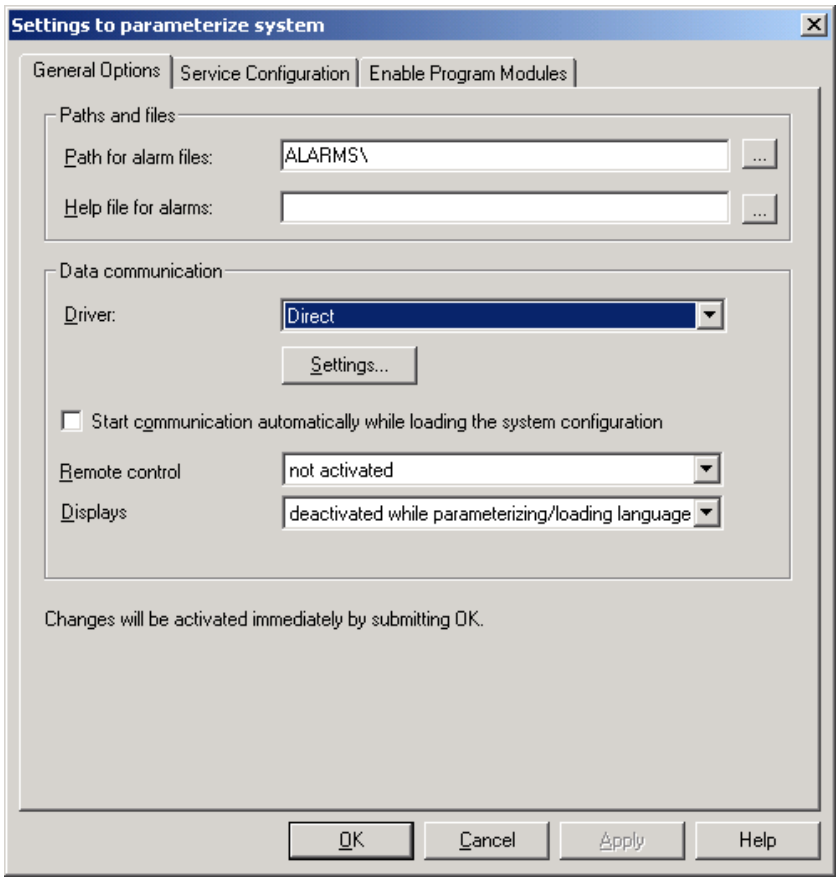


Figure 2.24
General Options

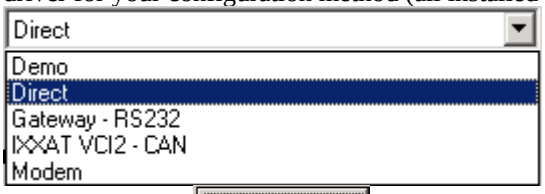


© Woodward

To define communication: Select “Devices” from the Command menu, “Settings…” from the drop down menu (the “Settings to parameterize system” dialog window will open), the “General Options” tab, and click on:

Driver pull down menu: in Data communication and select the applicable driver for your configuration method (all installed drivers will be displayed)

Figure 2.25 Drivers



Next click on the

button and the corresponding settings for the selected driver are displayed.

Requisite options: The tunable parameters are dependent on the driver

If the

button is clicked, another dialog window with more tunable parameters that are specific to the selected driver are displayed.

NOTE

If required, any components that were not installed in the initial installation may be installed at a later date by simply repeating the installation procedure and selecting the desired components to be installed.

For further information on the exact settings, please refer to page 10.

Communication option “Start communication automatically upon loading the plant configuration”

NOTE

Placing a check mark in the box next to the text enables this option. If this has been enabled, LeoPC1 will attempt to establish communication with the control unit immediately after the plant configuration has been loaded. If this option is disabled communication with the control unit must be started manually.

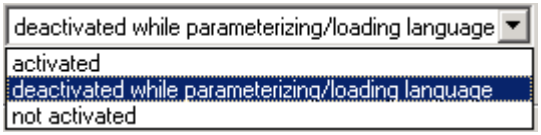
Remote control and Displays Select a mode from the list below:

Mode activated

or deactivate while parameterizing/loading language

or not activated

Figure 2.26 Remote control and Displays



To define the alarm directory Select “Devices” from the Command menu, “Settings…” from the drop down menu, the “General Options” tab, and click on:

Editing box: “Path for alarm files:”: text box and enter the desired directory

or Click on the

icon for “Path for alarm files:” and click on the appropriate file folders in the ”Select Path” dialog window.

NOTE

Faults that occur on your plant are logged in files that are stored in the directory specified here. This directory is always relative to the position of the corresponding plant configuration file (CFG file) and not relative to the position of the application file “Main.exe”. This means that if the CFG file is not stored in the main directory, the path must be completely specified for the directory “ALARMS\” or a corresponding directory must be created in the directory in which the CFG file is located.

Ensure that the new pathway ends with ”\” or it may not function correctly.

To define the alarm help file

Editing box

Select “Devices” from the Command menu, “Settings…” from the drop down menu, the “General Options” tab, and click on:
“Help file for alarms:”: and enter data path

or

Click on the ... icon for “Help file for alarms:” and click on the appropriate file folders in the ”Open” dialog window.

Service Configuration

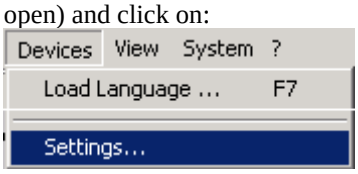
NOTE

The settings on this tab page should only be changed by experienced users or by your support team. Under certain circumstances the application will no longer process all data if the wrong parameters are entered here. Any changes made to this tab page do not become active until the application has been restarted or the plant configuration has been reloaded.

To open device settings

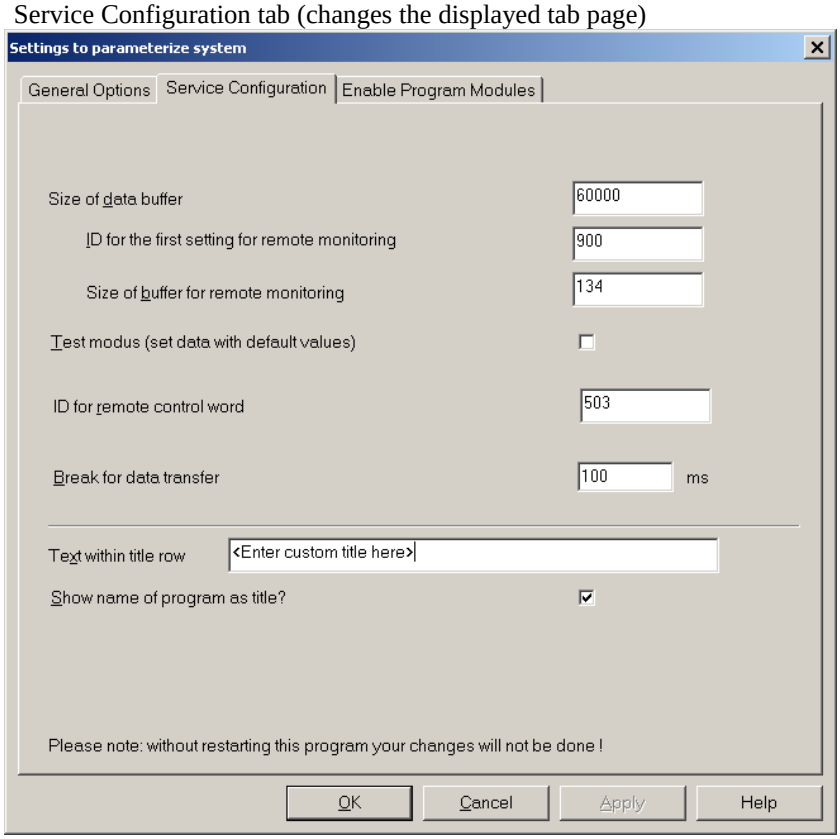
Select “Devices” from the Command menu, “Settings…” from the drop down menu (the “Settings to parameterize system” dialog window will open) and click on:

Figure 2.27
Open Device Settings



Service Configuration tab (changes the displayed tab page)

Figure 2.28
Service Configuration



© Woodward

To define the data buffer: Open Service Configuration tab page and click on:
Editing boxes: "Size of the data buffer" text box (The entered value must be greater than the highest parameter-ID and greater than the "ID of the first entry for remote monitoring" plus the "Size of the data buffer for remote monitoring")
and "ID of the first entry for remote monitoring" (The entry is dependent on the device and must be larger than the highest parameterization ID, all higher values will be ignored).
and "Size of the data buffer for remote monitoring" (Entry is the number of display data words plus 1).

NOTE

Some older control units may have different default values than newer control units of the same model in the text field "Size of the buffer for remote monitoring". If an incorrect value has been entered, some or all of the monitored values will not be displayed or logged!

Option: "Test mode" (if enabled, default values are read and saved)
Editing boxes: "ID for remote control word" (default is 503)
and "Break for data transfer" (default is 200 ms)

To define Windows title: Open Service setting tab page and click on:
Editing box: "Text within title row" (your desired title can be edited here)
Option: "Show name of program as title?" (Enables the display of the custom title by checking the block)

Enable program modules

NOTE

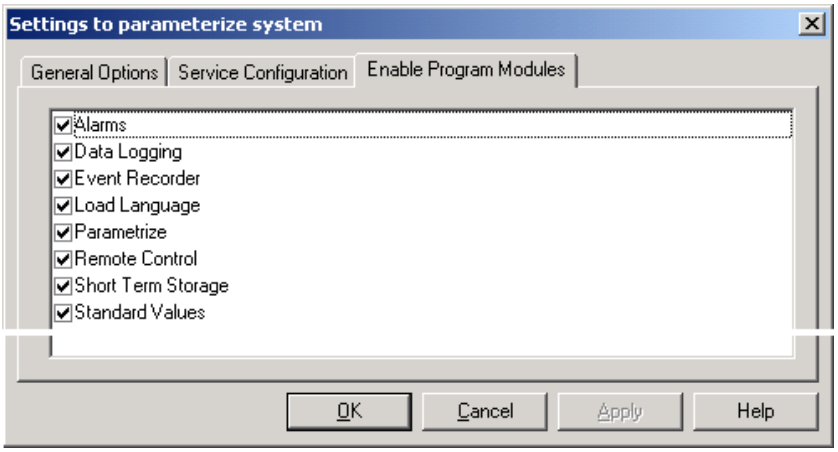
The Enable Program Modules tab page specifies which modules are available for the user. Only modules with check marks in the box next to it are enabled and displayed in black text. All Modules that have been disabled are displayed in grey text.

To select application modules: Select "Devices" from the Command Menu, "Settings…" from the drop down menu, the "Enable Program Modules" tab, and click on: (the "Settings to parameterize system" dialog window will open)

Figure 2.29
Open Device Settings

Enable Program Modules tab (changes the displayed tab page)

Figure 2.30
Enable Program Modules

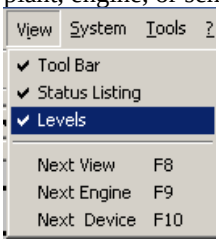


to activate — Insert a check mark inside the box next to the Module
to deactivate — Remove the check mark from the box next to the Module

View Configurations

To select view: Select View from the Command Menu and enable the desired selection by placing a check mark next to the desired View tool:

On possible bars:
View...Tool Bar (enables quick operator control via screen buttons)
View...Status Listing (supplies information to the operator)
View...Levels (enables fast changing between monitoring levels (i.e. power plant, engine, or sensors/actuators)



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Dynamic Configuration

Using the dynamic configuration module, LeoPC1 creates the parameter lists and display levels according to the options selected.

Components of the Dynamic Configuration

The components of the dynamic configuration are not immediately recognizable. If this type of configuration is utilized, the components of the dynamic configuration are hidden in the device and relevant files (*.cfg, *.opt and *.asm) for the configuration of the plant .The components can be subdivided as follows:

Device parameters: The corresponding values are tunable for the individual control unit and determine the parameter list for the individual application modules.

Language parameters: The corresponding values from the system data of the application determine the language for the display of your measured values.

Button: Performed via:
Devices...Refresh Configuration

Files: OPT files contain definitions for the dynamic configuration.
ASM files contain options for the specific control unit and are the tool files required for the CFG file to communicate with the LeoPC1 program.
CFG files contain options for the specific control unit and reflect any changes that have been made to parameters in the control unit.

Procedure for Dynamic Configuration

NOTE

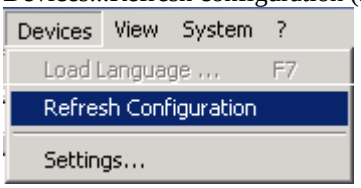
Devices with the option of dynamic configuration usually only require this once during the setup of the control unit. Dynamic configuration will not work if the control unit is not connected to the PC/laptop running LeoPC1.

To connect: Click on:

Communication...Connect or icon (connection to the selected device is made)

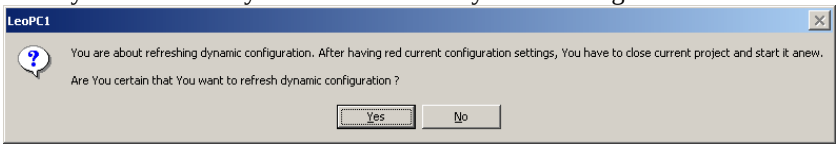
To configure dynamically: Click on:
Devices...Refresh configuration (starts the dynamic configuration)

Figure 2.31
Open Refresh Configuration



Question dialog "Are you certain that you want to refresh dynamic configuration?"

Figure 2.32
Refresh Configuration - Start

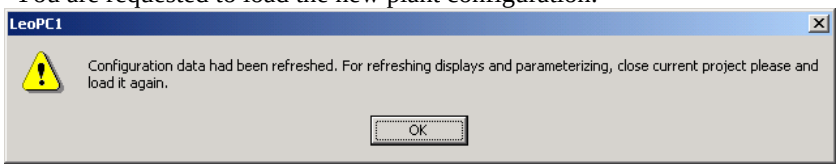

LeoPC1
You are about refreshing dynamic configuration. After having red current configuration settings, You have to close current project and start it anew.
Are You certain that You want to refresh dynamic configuration ?
Yes
No

and Click the “Yes” button (a status dialog window "Parameter data for dyn. configuration" appears briefly)

Question dialog

You are requested to load the new plant configuration.

Figure 2.33
Refresh Configuration - End


LeoPC1
Configuration data had been refreshed. For refreshing displays and parameterizing, close current project please and load it again.
OK

and

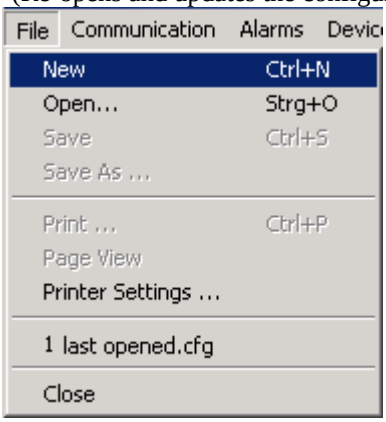
Click the “OK” button (the updating is not completed until you have re-loaded)

Select File...New or click on the icon (closes the configuration)

and

File...1 *Name of the configuration*.cfg
(Re-opens and updates the configuration)

Figure 2.34
Re-load configuration



© Woodward

Chapter 3.
Properties of LeoPC1

Depending on the type and configuration of the devices, LeoPC1 puts the components explained in detail below at your disposal.

Displays

LeoPC1 can display the current values of the connected devices. This permits for a complete overview of the status of your plant, machines, and devices.

Components of the Display

There are two primary formats to display the measured values and different statuses of your plant

- In a bit map format
- In a tabular format

In turn these formats may be configured in various ways and differ in quantity of displayed information (depending on you're the user and plant requirements).

The measured values can be displayed separately according to their significance, on plant-related, machine-related and device-related **levels:**

Power plant level:	This displays the most important monitored values of the plant.
Machine level:	This displays the most important monitored machine values.
Sensors/actors:	These represent all values of monitored devices.

Within these levels it is possible to change randomly between the various displays in compliance with the user's needs and thus obtain a complete overview of your plant status. If LeoPC1 is used for configuration only, only a simple background image is displayed of the plant.

The Plant overview dialog window is composed of the following **elements** for displays in compliance with your configuration:

Text boxes:	Information and comments
Parameter boxes:	Display of monitored parameter, value, and engineering unit
Buttons:	Navigation via: Buttons for alarm display Buttons to change between different levels
Bitmap:	Makes up the background design, integrating title, plant component descriptors, circuit diagrams, and open/closed breaker positions of the generator(s) etc.
Table:	Tabular display of monitored values

Procedure for Displays

To load configuration: Click on:

File...Open... or the icon

and Select the appropriate *.cfg file from the ”Open” file dialog window

NOTE

It is possible to open a *.cfg file by locating it through Windows-Explorer and double clicking on the desired file.

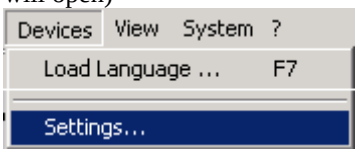
The control unit cannot be configured or updated unless communication between the control unit and the PC/laptop has been established.

If a *.cfg file is opened without a having an automatic connection established, the default values are displayed. If the connection is interrupted after a data transfer, the last values displayed will remain on the screen.

To set displays: Click on:

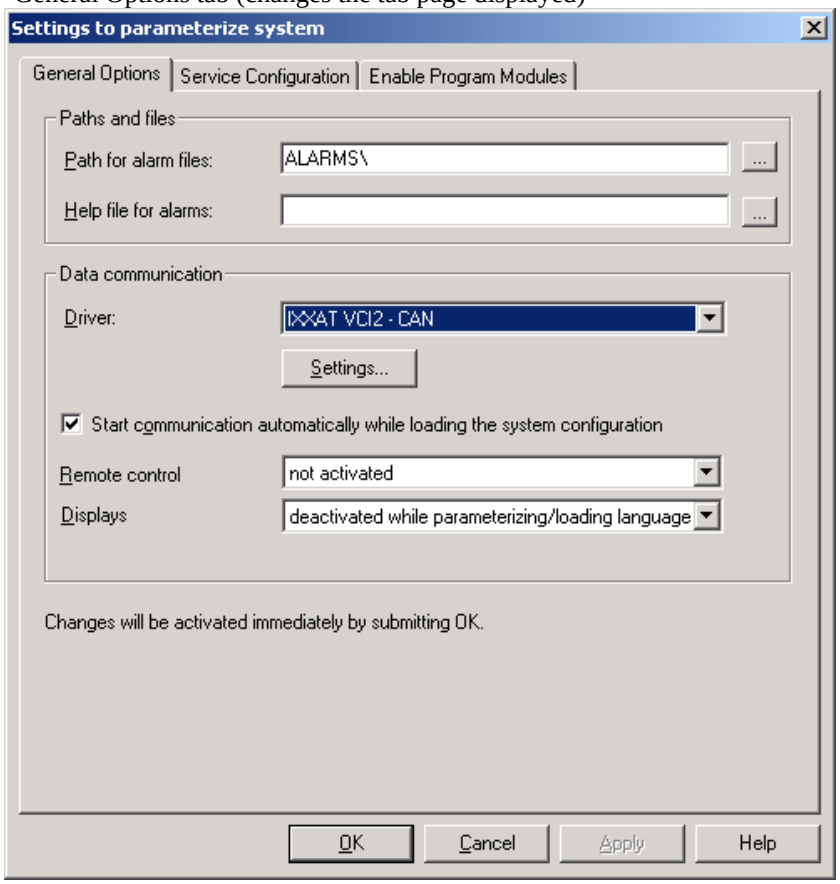
Devices...Settings... (The “Settings to parameterize system” dialog window will open)

Figure 3.1
Open Device Settings



General Options tab (changes the tab page displayed)

Figure 3.2
General Options



Put a check mark in the box next to “Start communication automatically upon loading the system configuration ” to enable automatic communication.

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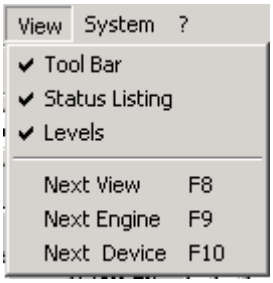
Displays From the Displays pull down menu select either
”Deactivate while configuration/load language”
or '”active”
Enable all changes by clicking on OK.

NOTE

The next time this configuration is opened the communication is established automatically. If a connection to the control unit currently exists, all the configured values are immediately displayed.

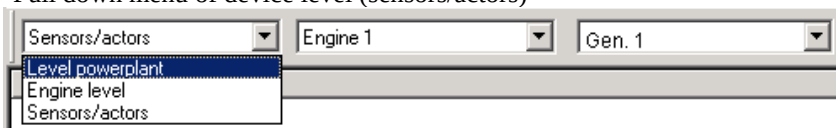
To select view: Click on:
View...Next View
View...Next Engine
View...Next Device

Figure 3.3
Open View menu



or Pull down menu of plant level
Pull down menu of engine level
Pull down menu of device level (sensors/actors)

Figure 3.4
Select View Levels



and Select the desired level

To close a configuration: Click on:
File...Close or click the icon (terminates your application)
File...Open...or click the icon and select the appropriate *.cfg file from the ”Open” file dialog window
or File...1 **.cfg
or File...2 **.cfg
or File...3 **.cfg
Opens the selected configuration and simultaneously closes the previously opened configuration file

Configuration

LeoPC1 can provide user support for the configuration of a control unit. This program permits a control unit to be set up for a new application or adapted for new requirements to an existing system within the control unit's individual parameters.

NOTE

In some cases it may be necessary to see the parameter list without displaying any configured values of a control unit. This can be accomplished by selecting "Devices" from the Command Menu and "Settings..." from the drop down menu. Click on the "Service Configuration" tab to display the tab page. Insert a check mark in the box to the right of the text "Test modus (set data with default values)". Verify any changes made to the tab page by clicking the "OK" button.

This function enables the user to configure, print, and/or save parameter lists without affecting any selected drivers or connected devices.

Do not use STD files that have been created in the Test modus to configure any control units. Some parameters will not load correctly unless the control unit is running and communicating with LeoPC1 when the change to the parameter is made.

Ensure that the "Test modus" is disabled after it is no longer required. Failure to do so will result in the user not being able to configure control units until this function is disabled.

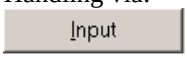
Components of the Configuration

For online configuration LeoPC1 provides a **configuration dialog window** with the following functions:

Device to be parameterized: Selection via the pull down menu with all corresponding devices

Relevant parameter: Display of:
Name (designation of the parameter)
Value (value last read of the parameter)
and Rights (read = 'R' and/or write = 'W')

Buttons: Handling via:



(By this means you change and transfer the parameters)

(Reads one or more current values from the device)

(Aborts reading of values)

(Reads all current values from the device)

(Prints out the current parameter list)

(Saves the current parameter list as an STD file)

(Calls corresponding help file)

(Closes the configuration dialog)

NOTE

It is possible to parameterize multiple units by saving the control unit configuration as an STD file. If the user desires to transfer the same configuration settings to a second control unit, this is accomplished by utilizing the "Standard Values" dialog window (see "Standard Values" after page 45).

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Procedure for Configuration

NOTE

Communication between the control unit and LeoPC1 must exist for online configuration. If this connection does not exist, you will be asked whether you wish to start this connection.

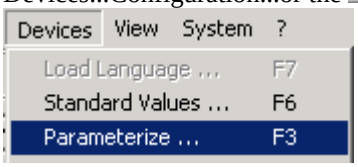
To connect: Click on:

Communication...Connect or the icon (connection to the selected device is made)

To open configuration: Click on:

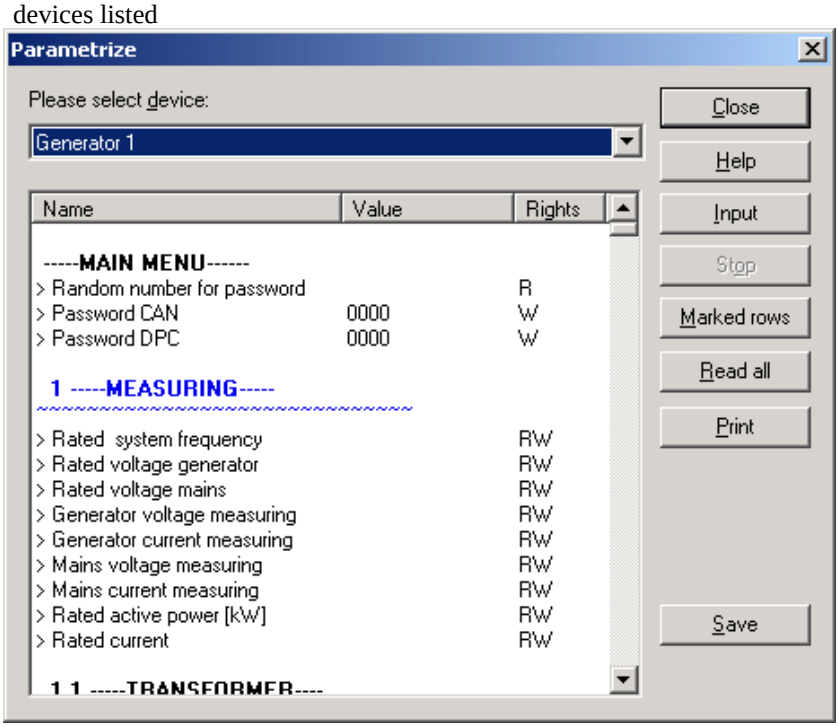
Devices...Configuration...or the icon (Configuration dialog is opened)

Figure 3.5
Open Parameterize



Select the desired control unit using the pull down menu with all available devices listed

Figure 3.6
Parameterize



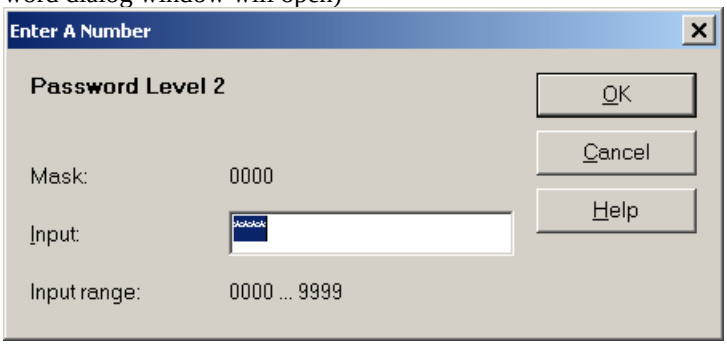
NOTE

Before the parameters for a control unit may be changed, it may be necessary to enter a password in the Parameterize dialog window. If this is required follow the operating instructions that pertain to the device being configured.

To unlock the device protection: To enable configuration, double click on:

Parameter ”password level 2” in the Parameterize dialog window (the password dialog window will open)

Figure 3.7 Enter Password



and Enter the password specific to the device

NOTE

After the password has been accepted, the user may change all parameters with write rights ("W" in the column Rights). A parameter that has only a read right ("R" in the column Rights) cannot be changed.

Parameterization: Open Parameterization and click on:

Read all (Only if all current parameters are to be read)

or Highlight one or more parameter that should be read

and Click Marked rows (the marked line values are read from the device)

or Double click on the desired parameter (scroll in parameterization dialog window to the desired parameter)

and Click Input (an input dialog window for the parameter open)

NOTE

For the input dialog window, a range of values that conform to the parameter type may be entered.

The possible inputs can be found in chapter "Inputs (Configuration and Standard Values)" beginning on page 41.

In contrast to the standard values dialog, the parameters entered via the input dialog windows are transferred immediately to the device when the user confirms the input dialog with the ”Ok” button. Prior to making any changes, ensure that values being transferred are the required values.

All parameters that failed to read when prompted are highlighted in blue. The user may attempt to re-read these parameters by clicking on the “Marked Rows” button.

To stop: Click on:

Stop (Aborts reading of values)

To print: Click on:

Print

and Select the desired options in the print dialog window

To save: Click on:

Save

and Create or update file in the “Save As” dialog window

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NOTE

The file name must end with ".std" and the file must have the STD format. The current settings will be saved in STD format in the file specified by the user. The STD file may be modified offline without an existing connection or for archiving as standard values that may be transferred to a control unit through the Standard Values procedure.

To disconnect: Click on:

Communication...Interrupt or click on the icon (terminates the connection)

Inputs (Configuration and Standard Values)

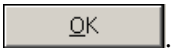
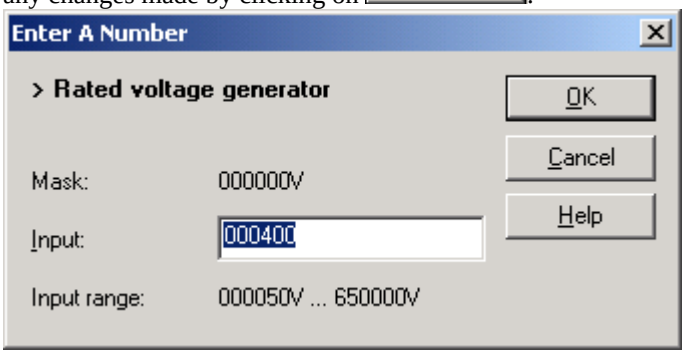
Enter A Number Enter the numerical value for a parameter in the input range. The first line of text for the window is the parameter description. The second line is a generic screen definition for the control unit. The third line is the input field in that the user can change the value. The last line is the input range. Verify any changes made by clicking on  .

Figure 3.8
Enter A Number



Real power set value	Outgoing power	Fixed value power	Reference power
Input	E0000 to 6900	C0000 to 6900	I0000 to 6900

Cosine-Phi	Capacitive/Lagging		Inductive/Leading
Input	k0.01 to 0.99	1.00	i0.01 to 0.99

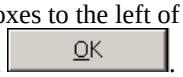
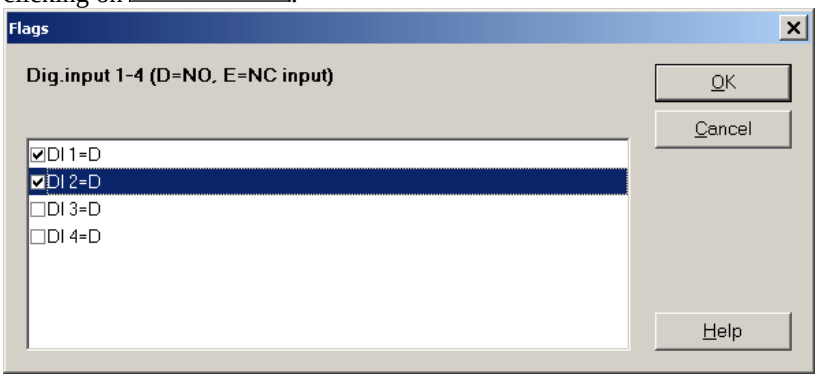
Flags The first line of text is the parameter description. The input field contains up to a maximum of 16 discrete inputs, which may be enabled (E) or disabled (D). In order to change the state, check marks must be added or removed from the boxes to the left of the discrete input. Verify any changes made by clicking on  .

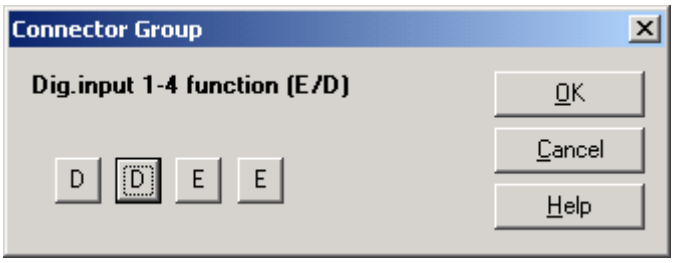
Figure 3.9
Set Flags



Connector Group

The first line of text is the parameter description. Below the parameter description are four buttons that display the current status of the button. To change a status, press the desired button. The button will change the displayed status to the next value. Verify any changes by clicking on OK.

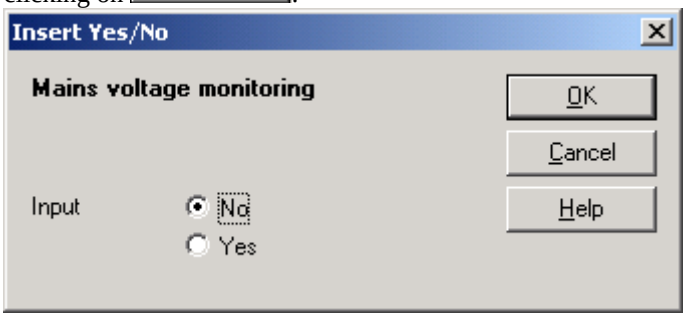
Figure 3.10
Set a Connector Group



Insert YES/NO

Set value of the parameter on YES or NO. The first line of text is the parameter description. Below the parameter description is the option field. The option may be changed by clicking on the desired field and verified by clicking on OK.

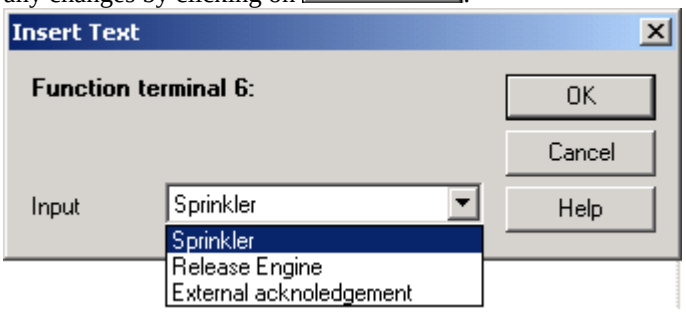
Figure 3.11
Insert Yes/No



Select A Text

The first line of text is the parameter description. Below the parameter description is the input field that contains a pull down menu to select the desired text. The top line is the current displayed text. The text messages listed below are the messages that may be configured to the input. Verify any changes by clicking on OK.

Figure 3.12
Select Text



© Woodward

Insert A Text

The first line of text is the parameter description. Below the parameter description is the input field. The user may define the text of a parameter up to 16 digits in the input field. Verify any changes by clicking on OK.

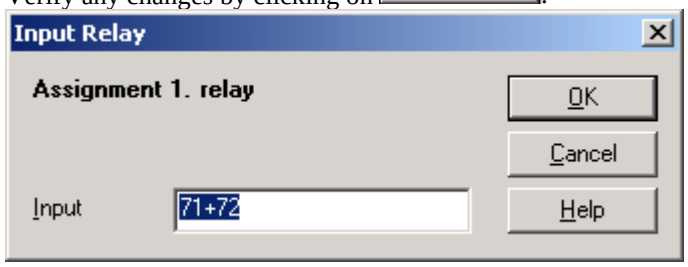
Figure 3.13
Insert Text

Input Relay

The first line of text is the parameter description. Below the parameter description is the input field. The relay manager function linking is configured here. The numeric codes for the desired functions are linked with the logic symbols listed below. Up to three functions may be linked. The links are transmitted in three sequential words. The numeric codes for the relay manager functions may be found in the product manual that is being configured.

Verify any changes by clicking on OK.

Figure 3.14
Input Relay

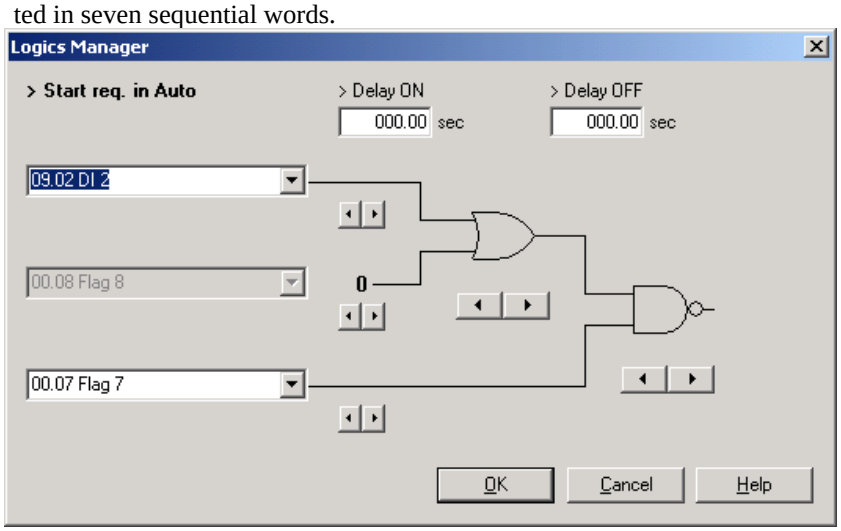


Type of links	OR	AND	NOT	End coding
Input	+	*	-	

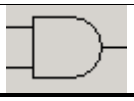
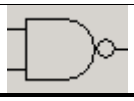
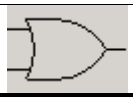
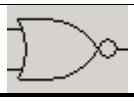
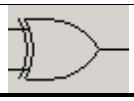
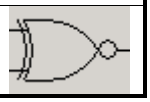
Logic manager

The *LogicsManager* is configurable with up to two time delays, three input fields, two unary sign inputs, and two Boolean sign inputs. Verify any changes by clicking on OK. The configuration will be transmitted in seven sequential words.

Figure 3.15
Logics Manager



Sign, unary	NOT value	Value	always “1“	always “0“
Description	The value is inverted	The value is looped 1:1	The value is independent of the actual state pass over as “TRUE“.	The value is independent of the actual state pass over “FALSE”.
Input				

Linkage, binary	AND	NAND	OR	NOR	XOR	NXOR
Description	Logical AND	Negative Logical AND	Logical OR	Negative Logical OR	Exclusive OR	Negative Exclusive OR
Input						

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Standard Values

LeoPC1 permits the user to archive plant-specific parameter settings as standard value files. These files can be stored and modified offline. The user may later transfer these files to the appropriate device. This function permits the user to quickly configure multiple control units of the same design to the same configuration of a pre-existing control unit.

Components of the Standard Values

For configuration with standard values a **standard value dialog window** is available to the user with the following functions:

Devices to be parameterized: Selection via pull down menu with all corresponding devices
Device of the open file: Selection via pull down menu with all corresponding devices
Relevant parameters: Display of:
Name (designation of the parameter)
Value (value last read of the parameter)
and Rights (read = 'R' and/or write = 'W')

Buttons: Handling via:
Load (loads the desired file in STD format)
Input (the user may change the parameters without transferring the file)
Marked rows (transfers one or more selected values to the device)
All rows (transfers all displayed values to the device)
Stop (aborts transfer of values)
Print (prints out the current parameter list)
Save (saves the current parameter list as an STD file)
Help (opens the Help window)
Close (closes the standard values dialog window)

Procedure for the Standard Values

NOTE

Only one path of communication should exist with a device that is going to be parameterized with standard values. The path of communication should be initiated prior to opening the “Standard Values” dialog window if any parameters are going to be transferred. If parameter values are just going to be modified and not transferred, it is not necessary to establish communication with the control unit.

If only one control unit needs to have the parameters modified, it is better to perform these modifications online with the “Parameterization” dialog window.. (see "General Configuration” starting on page 22).

When configuring with the “Standard Values” dialog window, only load files that have been taken from identical control units. Do Not use empty STD files (i.e. STD files from the demo). If empty STD files are used, errors in the configuration may occur under certain circumstances.

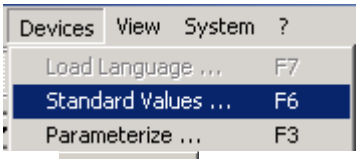
To connect: Click on:

Communication...Connect or the icon (connection to the selected device is made)

To open standard values: Click on:

Devices...Standard values...or the S icon

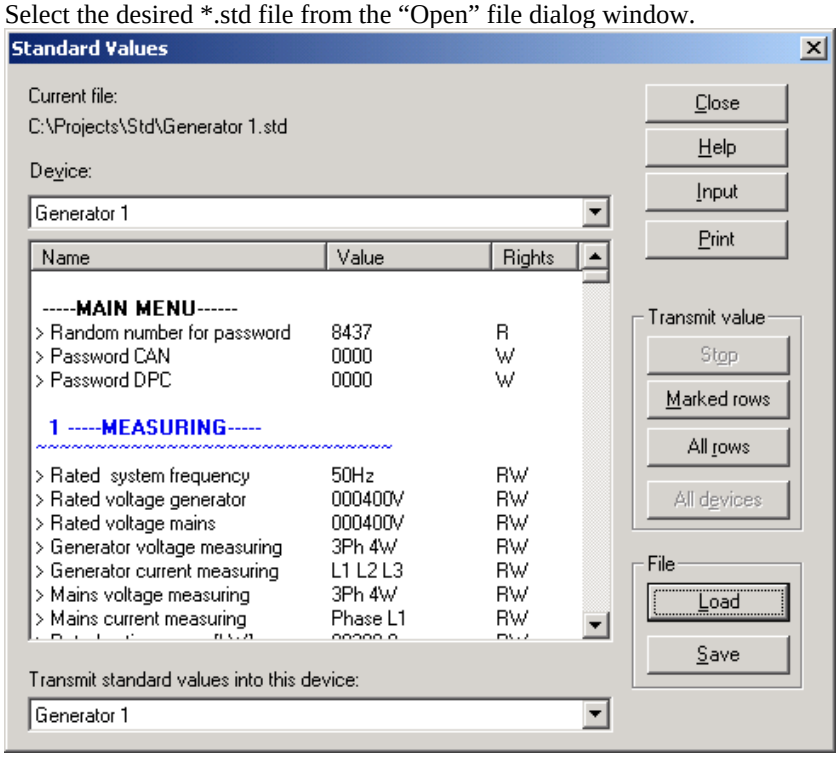
Figure 3.16
Open Standard Values



Click Load ...

and Select the desired *.std file from the “Open” file dialog window.

Figure 3.17
Standard Values



NOTE

The file name must end with ".std" and the file must have the format STD.

Select the control unit to be configured from the pull down menu at the bottom of the “Standard Values” dialog window.

NOTE

Prior to changing any parameters in a control unit, the level 2 password must be entered into the device. Follow the procedure for entering a password that applies to the individual control unit.

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To unlock the device protection

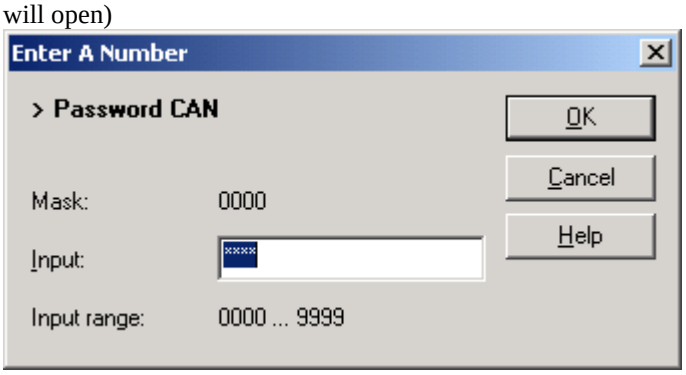
Open standard values and click on:

Parameter “password level 2” in the list box

Next click on [Input]

or Double click on the text line for the password (the “Input” dialog window will open)

Figure 3.18 Enter Password



and Enter the correct password for the control unit

and Click on [Marked rows] (this will transmit the password)

NOTE

After the password has been accepted, all parameters with write rights ("W" in the column Rights) may be changed. A parameter that has only read rights ("R" in the column Rights) cannot be changed.

To parameterize:

Open the ”Standard Values” dialog window and click on:
Desired parameter (scroll in parameter list to the corresponding position)
Click on [Input] (an input dialog window appropriate for the parameter is opened)

NOTE

There are various input dialog windows for entering parameter values. The input dialog windows vary according to the type of parameter.

The possible inputs may be found in the "Inputs (Configuration and Standard Values)” chapter starting on page 41.

Unlike the configuration dialog window, the values modified here are not transferred immediately to the control unit. These values must be transferred separately.

If parameter cannot be written an error message is displayed.

To transfer:

Open the “Standard Values” dialog window and click on:
One or more lines that should be transferred to the device (to highlight multiple line hold the “Ctrl” button on the keyboard while highlighting the parameters)

and [Marked rows] (Values of the marked lines are transferred to the device)

or [All rows] (All values are transferred to the device)

To stop:

Click on:
[Stop] (Only if necessary to abort transfer of values)

To print:

Click on:
[Print]

and Select the desired options in the print dialog window

To save: Click on:

Save

and The desired file via the “Save as” dialog window

NOTE

When saving a file, the file name must end with ".std" and the file must have the STD format. After a file has been saved in this format, it is available for modification or archiving as standard values that can be loaded and transferred at a future date. Saving the file again is only required if the values of the previously loaded file been changed.

To disconnect: Click on:

Communication...Interrupt or the icon (terminates the connection)

Remote Control

LeoPC1 can provide the user with support for the control of your control unit from a remote location. This permits the user to start and stop the plant, machines, and devices or modify selected parameters right from your office or residence.

Components of the Remote Control

For control a **remote control dialog window** with the following functions is available:

Device to be controlled: Selection via pull down menu with all available devices

Remote control parameters: Editable values:
Set point of active power
Generator Cosphi (power factor)

Control words: Enable/disable:
Acknowledgement (resets the alarm memory of the device)
Remote stop (stops your controlled machine)
Remote start (starts your controlled machine)

Buttons: Handling via:

Set (Transfers the selected commands to the device)

Help (Opens Help window)

Close (Closes the remote control dialog window)

NOTE

The Control Word “Acknowledgement” is automatically reset after a specific time period if the existing communication link does not permit the message to transmit constantly.

The Command Word “Remote Stop” has priority over “Remote Start” if there is an existing communication link to the control unit.

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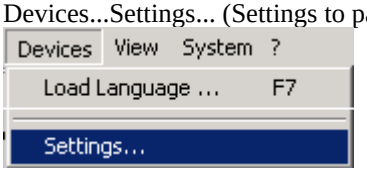
Procedure for the Remote Control

NOTE

If the user desires to use the remote control feature, this must be set when starting the configuration. The remote control feature must be enabled individually for each unit that will utilize this. The control unit must be configured for remote control and not controlled by another component of the system. Read the operation instructions for the control unit prior to enabling the remote control function.

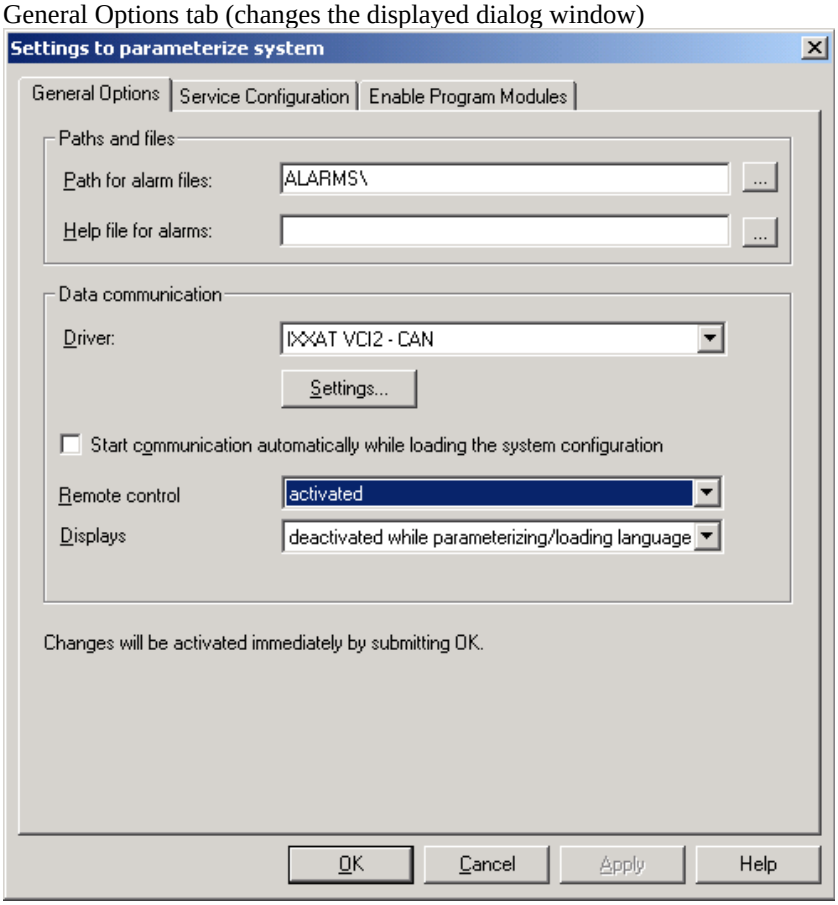
To define communication: Click on:
Devices...Settings... (Settings to parameterize system dialog is opened)

Figure 3.19
Open Device Settings



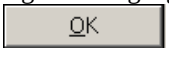
General Options tab (changes the displayed dialog window)

Figure 3.20
General Options



Remote control
or

Select “activated” (standard)
“Deactivate while paramerterzing/load language”

Verify changes by clicking on 

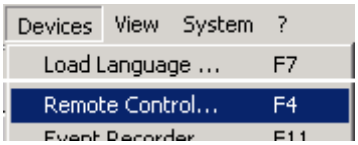
To connect: Click on:

Communication...Connect or the icon (the connection to the selected device is created...)

To open remote control: Click on:

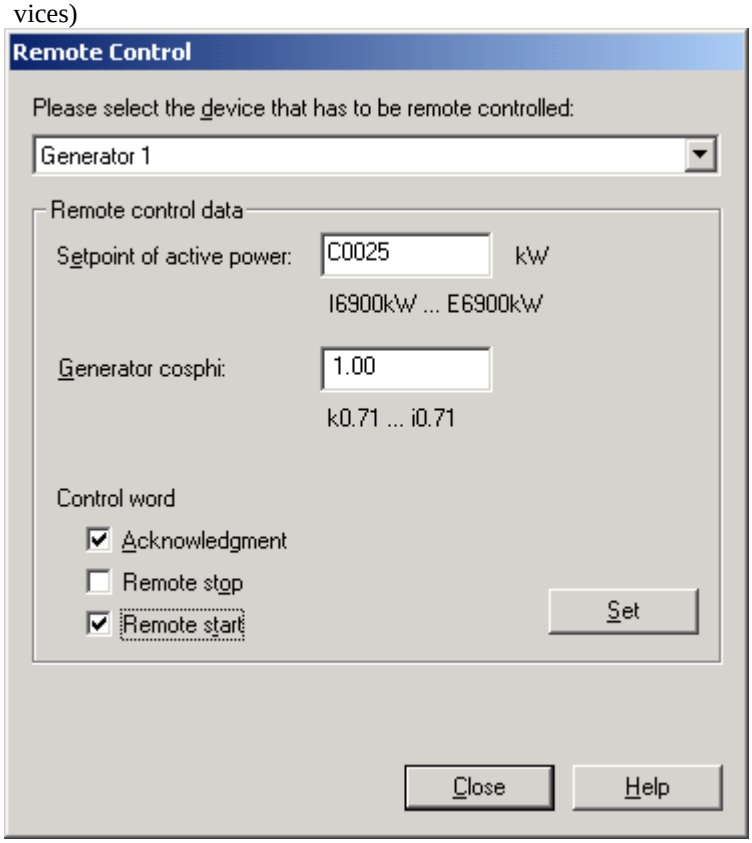
Devices...Remote control... or the F icon

Figure 3.21
Open Remote Control



To select: Open remote control and click on:
The control unit to be controlled (pull down menu with all available devices)

Figure 3.22
Remote Control



To control: Open remote control and click on:
Desired editing box: Active power set point (set process and Kw level)
and/or Generator Cosphi (set power factor)
and Input the requisite value
Desired option/s: Acknowledgement (resets the alarm bits in the device)
and/or Remote stop (overrides remote start if it is selected simultaneously)
and/or Remote start
and
Click Set (sets your selection for transfer)

To disconnect: Click on:

Communication...Interrupt or the icon (terminates the connection)

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Data Logging

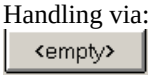
LeoPC1 has the capability to perform data logging of selected parameters of the user's plant for the purpose of control.

Device to be controlled: Selection via pull down menu with all available devices
Measured values to be logged: Selection via pull down menu with the specific measured values
Selected values: Display on data diagram with time and value axis
Logging parameters: Display of sampling rate and logging time period
Display individual line: Option that displays only the selected measured value
Display several lines: Option that displays all measured values defined in a maximum of 8 buttons

Parameter dialog: with the following options:
Logging time period in minutes
Sampling rate in seconds
Display of the storage space requirement to be expected

Scaling dialog: With the following options:
Logging time period axis X with selection facility of:
Complete logging time period
Individual setting (time from... to...)
Measured value, axis Y, with facility for selecting:
Complete value range
Individual setting (measured value from... to...)

Buttons: Handling via:



(Selected values for 8 parameters that can be individually formatted and scaled)

(Allows the insertion, removal and setting of the selected measured values)

(Starts the desired logging)

(Stops the desired logging)

(Loads the desired file in LLO format onto the display)

(Closes the current file in LLO format on the display)

(Prints out the current logging diagram)

(Saves the current logging as an LLO file)

(Opens the Help window)

(Closes the data logging dialog)

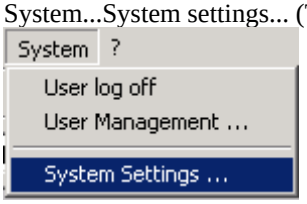
Procedure for Data Logging

NOTE

It is possible to set data logging when the configuration is started.

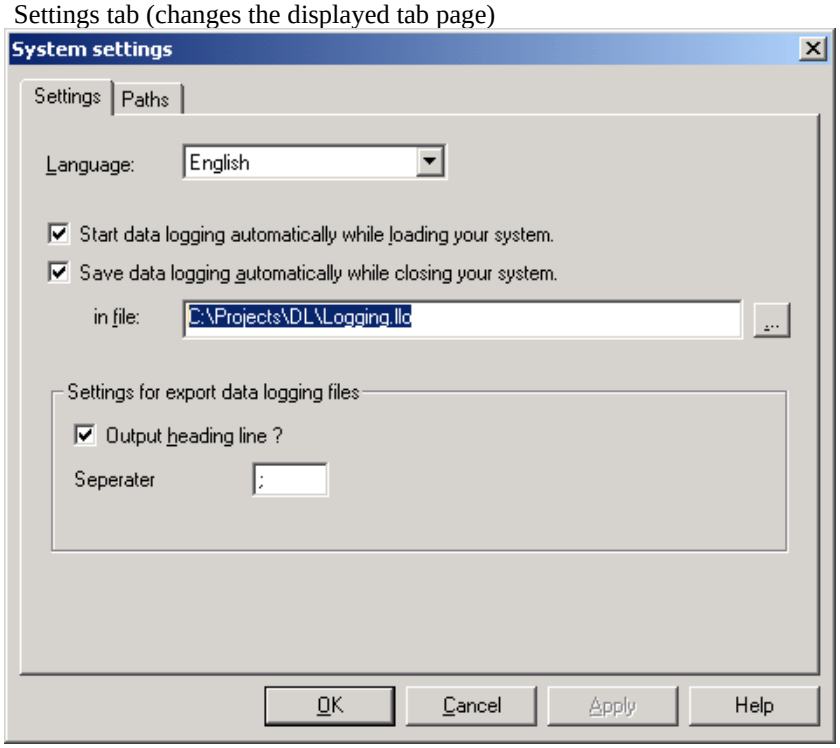
To define data logging: Click on:
System...System settings... (The" System settings" dialog window will open)

Figure 3.23
Open System Settings



Settings tab (changes the displayed tab page)

Figure 3.24
System Settings



Start data logging automatically while loading your system.
Save data logging automatically while closing your system.

activate Insert a check mark in the box to the left the option desired
deactivate Remove the check mark

Click the ... icon to right of the "in file:" text box and create or select the file to store the data in from the "Save as" dialog window.

NOTE

File name must end in ".llo" and the file must have the format LLO.

To log: Click on:

Communication...connect or the ⇩⇧ icon (the connection to the selected device is established...)

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To open data logging: Click on:

Devices...Data Logging... or the D icon (Data Logging dialog is opened)

Figure 3.25
Open Data Logging

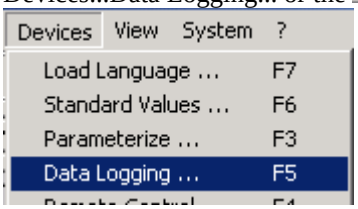
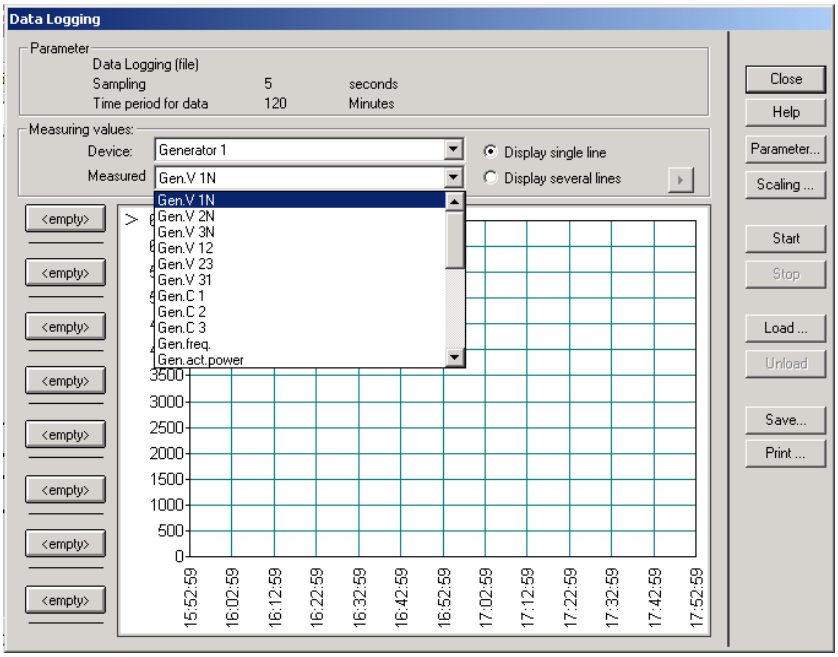


Figure 3.26
Data Logging



To load: Click on:

Load ...

and Select the file to be loaded from the “Open” file dialog window

NOTE

Set the tick desired by you to activate the option.

To select: Open data logging and click on:
Desired device (pull down menu with all available devices)
Desired measured value (pull down menu with all corresponding measured values)

Desired options: Display single line (the selected measure value is displayed)

or Display several lines (the selected and inserted measured values are displayed with their individually definable scaling and formatting)

and Click on <empty> (allows you an assignment of the selected measured value)

Click the button (select the appropriate action from the drop down menu)
Append: adds the selected parameter to be monitored to the selected button.
Delete: removes the selected parameter from the selected button.

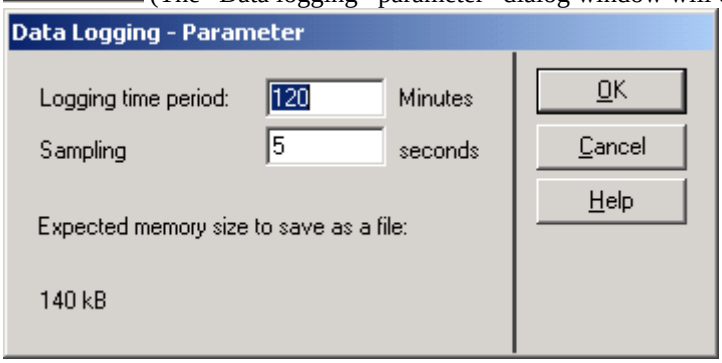
or Properties... opens the “Line Setting Definition” dialog window

and If necessary assign its scaling individually by clicking on Scaling ...

To log: Open data logging and click on:

Parameter... (The "Data logging –parameter" dialog window will open)

Figure 3.27
Data Logging - Parameter



Desired editing box: Sampling rate (enter value between 2 and 120 seconds)
and/or Logging time period (value between 1 and 32,767 minutes possible)

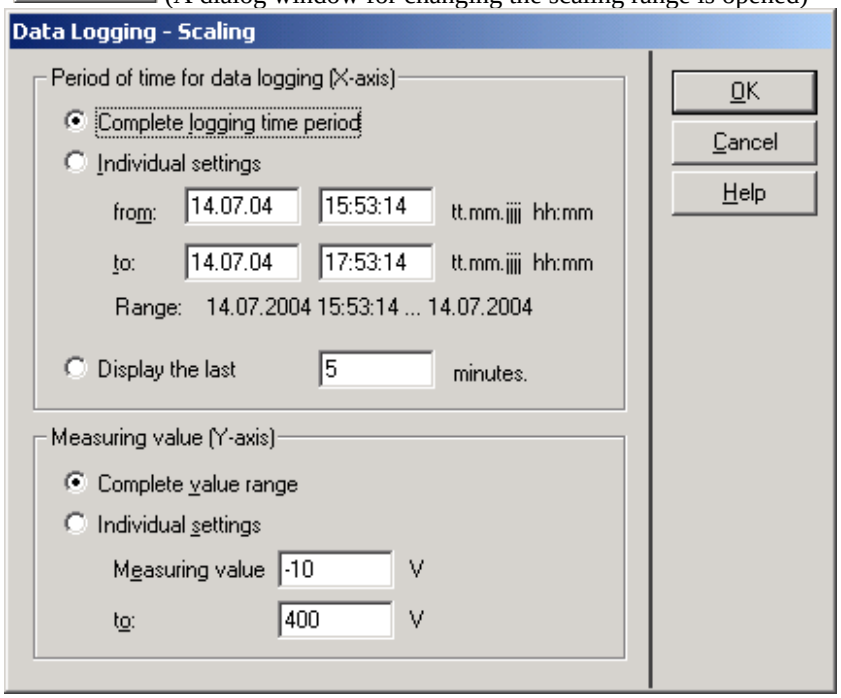
OK (Parameter dialog is closed)

NOTE

Prior to starting data logging ensure that there is enough storage space for the file that is created. When smaller sampling rates for longer periods of time are utilized, the larger the file size becomes. If adequate storage space is not available for the data-logging file, the data logging will not occur. Files of several megabytes can be produced quickly with long periods of data logging. The file for the data logging session is create prior to the session starting, preventing the hard drive space being utilized for other applications.

Scaling ... (A dialog window for changing the scaling range is opened)

Figure 3.28
Data Logging - Scaling



Select desired options: Complete logging time period (according to the specified time)
or Individual setting
and Enter time range from... to...
Select desired options: Complete value range (according to the specified parameters)
or Individual setting
and Enter measured value range from... to...

Verify changes by clicking on OK (scaling dialog is closed)

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NOTE

A change in the scaling results in an enlargement of the extracted data that is retained after the logging window is closed. If the option “Display several lines” is selected, the individual lines may be defined and activated by selecting the desired parameter button and editing the scaling for that parameter.

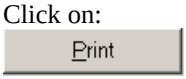
Click

(the selected recording will be started)

To zoom: Place the cursor at the start of the area that is to be examined and highlight the desired area by pressing and holding the left mouse key. Release the mouse key when the desired area is completely highlighted. It is possible to perform this process multiple times.
Reset the zoom by clicking the right-hand mouse key (if necessary, by clicking it several times). The user may zoom out by pressing and releasing the right mouse button. This may be performed multiple times or until the original scale is displayed.

To stop: Click on:

(Only if it is necessary to terminate the procedure prematurely)

To print: Click on:


And Select the desired options in the print dialog

To save: Click on:

And Select via the Save as dialog

NOTE

File name must end in ".llo" and the file must have the format LLO.

To unload: Click on:

(Only if you would like to close the file currently loaded)

Disconnect: Click on:

Communication...disconnect or the icon (terminates the connection)

Short-term Storage

LeoPC1 can log specific criteria of selected events from the available control units. The monitored parameters for this selective logging are displayed as a guide value.

Components of the Short-term Storage

The LeoPC1 provides a Short-term storage dialog for logging appropriate defined events or limiting values. Functions are as follows:

General dialog: with the following options:
Current settings
Selected device:
Activation by: <selected parameter/alarm/value>
Start Short-term storage automatically while loading system

Buttons:

(Opens the Settings dialog)

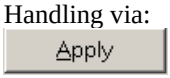
(Starts the desired monitoring)

(Stops the current monitoring)

Protocol dialog: with the following options:
Events that occurred
No., Date, File, Start, End, Event

(Deletes all events from the display)

Buttons: Handling via:



(Confirms changes without closing the dialog window)

(Opens Help window)

(Closes the Short-term storage dialog window)

(Confirms changes and closes the dialog window)

Settings dialog: Tunable:

- Device (pull down menu with all available devices)

Value for activating Short-term storage

- Alarm (pull down menu with all possible alarms)
- Exceeding a limit value (pull down menu for parameter, box for limit value)
- Edited value (selection of the Displayed ID, the operator, box for event value)

Recording parameter

- At issue time in seconds
- Saving interval in seconds
- Hold-back time in seconds
- Follow-up time in seconds

File name (file name the event is saved as in the DL directory)
Display of the expected storage space requirement per event

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Procedure for Short-term Storage

NOTE

Only one event can be monitored at a time. If the monitored fault condition occurs during the follow-up time, the event is not logged. The short-term storage is still processing the data from the previous fault occurrence and is not reset for monitoring.

The parameter settings described in the following text are dependent upon the configured settings and the configuration of the plant to be monitored. If a low save interval setting is configured and a large data base must be processed or a low Hold-back time is configured, the result may be that the time interval that is save is larger than the time interval that was configured.

To open short-time storage: Click on:

Devices...Short-term storage...or the K icon (the Short-term storage dialog window will open)

Figure 3.29
Open Short-term Storage

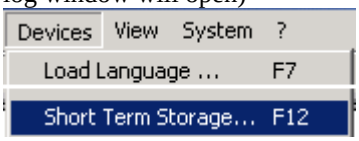
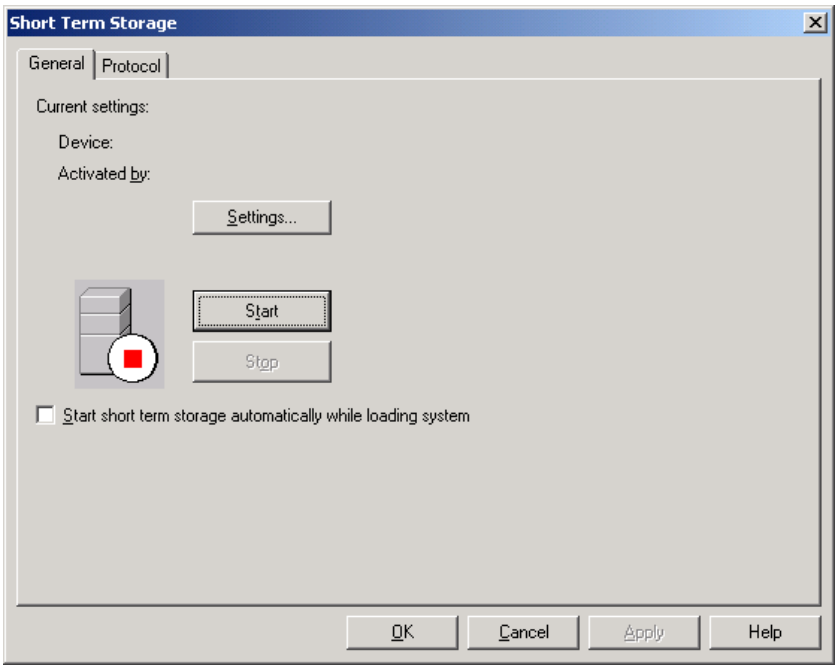
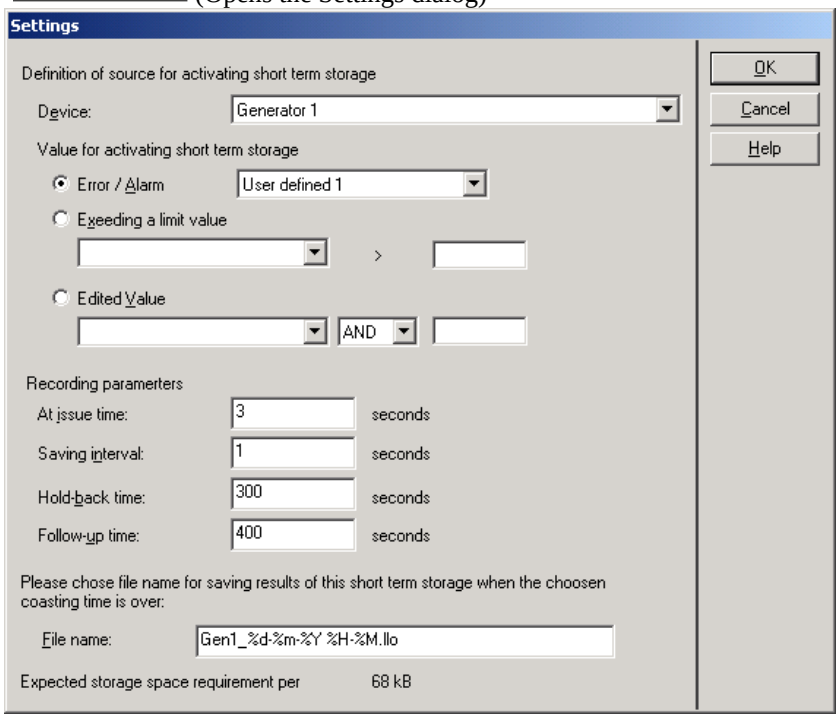


Figure 3.30
Short-term Storage



To set: Open short-term storage and click on:
General tab page (changes the dialog level)
Settings... (Opens the Settings dialog)

Figure 3.31
Short-term Storage - Settings



Desired event source: Desired device (pull down menu with all available devices)
Desired event: Activation of:
Error/Alarm Enable by clicking on text (activates as soon as the defined alarm has occurred)
and Selection of the error/alarm message of the pull down list with all defined events.

NOTE

If an event that is controlled by an alarm message, only select the activating message.

Exceeding a limit value Enable by clicking on text (activates as soon as a limit value has been exceeded)
and Selection of the desired measured parameter from the pull down list
and Input of the desired upper limit value

NOTE

If you wish to utilize the option "Exceeding a limit value", select the parameter to be measured and enter the corresponding limit value.

Edited value Activates as soon as the condition is fulfilled
and Selection of the desired display ID from pull down menu (list of protocol)
and Selection of the appropriate operator

NOTE

The option "Edited value" offers the user more complex configurations. This does also require detailed knowledge of operands. The input of the value occurs unformatted (i.e. a battery voltage of 24.8 volts (formatted) is input as 248 (unformatted)).

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Operand	AND	Less than	Less equal	Greater than	Greater equal	Equal
Description	Logic AND, for interpreta-tion binary values	Less than the specified value	Less than or equal tithe specified value	Greater than the specified value	Greater than or equal tithe specified value	Equal to the specified value
Input	AND	<	<=	>	>=	=

Desired parameters: Input of:
At issue time: Minimum time for which the event must occur to activate monitoring
Saving interval: Minimum time that should lie between two data samplings
Hold-back time: Time that is logged before and after the event occurs to show system status prior to and during the fault condition
Follow-up time: Time required for the data logging to process the collected data

NOTE

The Holdback time and the Follow-up time added together make up the entire logging time period.

and: File name (designation of the file in which the event period is saved)
Example: Event-on_2001-07-13_at_12-12_hrs.llo

NOTE

When assigning the file name, it is possible to use a time stamp:

Permitted formatting	Year	Month	Day	Weekday / Week	Hours / Minutes / Seconds
Input	%Y / %y	%m / %b / %B	%d / %a / %A	%w / %W	%H / %M / %S
Format (example)	2004 / 04	06 / Jun / June	30 / Mo / Monday	3 / 27	10 / 55 / 45

To monitor: Open short-term storage and click on:
Start (in the status line "STS" appears)
Start Short-term storage automatically upon loading the configuration
and If a defined event occurs, logging is activated

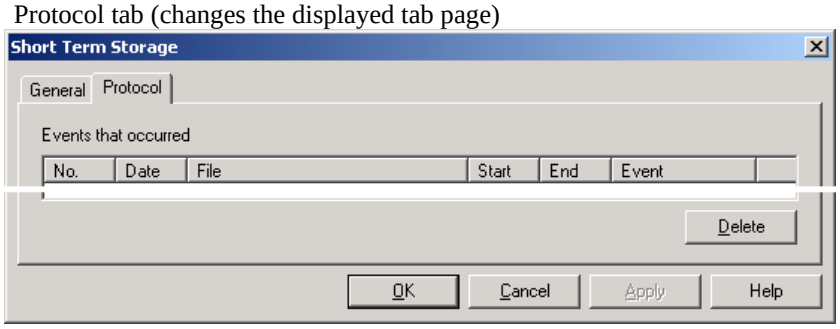
To stop: Open short-time storage and click on:
Stop
and Monitoring of the event is terminated

NOTE

It is possible to graphically display the generated files via the data logging module and, if required, select and export the measured values as described there.

To monitor: Open short-time storage and click on:
Protocol tab (changes the displayed tab page)

Figure 3.32
Short-term Storage - Protocol



and The events that have already occurred are displayed with:
No., Date, File, Start, End, Event

Delete (Deletes all displayed events from the dialog window)

NOTE

The "Events that occurred" list does not automatically update. To update the list the dialog window must be closed and re-opened. When a new event occurs the previous events are deleted from the display.

Alarm Management

LeoPC1 can log and display all events and alarms that occur in the connected devices.

Components of the Alarm Management

The following components are available for alarm management:

Alarm Management Dialog with the Following Functions:

Desired alarm file: Selection via scroll menu of the possible devices
Buttons: Handling via:
Corresponding alarm list: Display of alarm time (Time... until...)

Help (Opens Help window)

Entry ... (For manual entries in the alarm list)

Print ... (Currently not functional)

Close (Closes the alarm management dialog window)

Current Alarm Dialogs with the Following Functions:

Current alarms: Display of the current or device specific alarms
Buttons: Handling via:

Help (Opens help window if available)

Close (Closes the current alarm dialog window)

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Procedure for Alarm Management

NOTE

If configured as follows, a new file is created for each day. The file name is assigned as the date. Communication to the control unit must exist for these files to be created.

To define system settings: Click on:
Devices...Settings... (Settings to parameterize system dialog window will open)

Figure 3.33
Open Device Settings

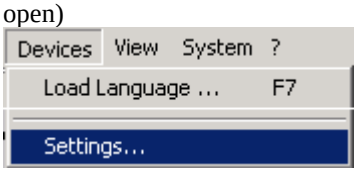
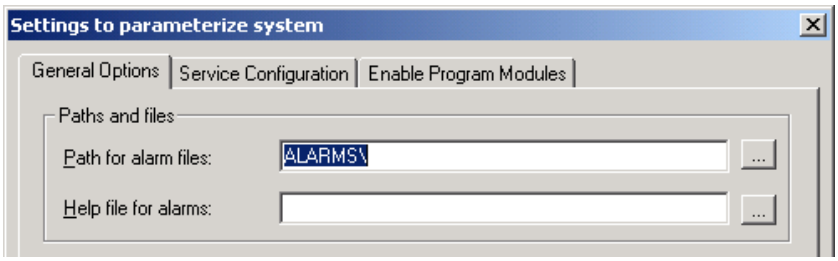


Figure 3.34
General Options



Editing box: Click on the text box for ”Path for alarm files”: and enter directory
or
Click on the ... icon and select from the “Select Path” directory dialog window (”ALARMS\” is the default)

NOTE

This directory is always relative to where the corresponding plant configuration file (CFG file) is stored and is not relative to where the applications file "Main.exe" is located. If the CFG file is not stored in the main directory, the user must specify the path completely for the directory ”ALARMS\“ or in the directory where the CFG file is located an alarms directory must be created.

Ensure that the pathway input into the settings ends with '\'.

Editing box: 'Help file for alarms': and enter file path
or
Click on the ... icon and select file path from the “Open” file dialog window

Managing Alarms

To open alarm management: Click on:
Alarms...Management... (“Alarm Management” dialog window will open)

Figure 3.35
Open Alarm Management

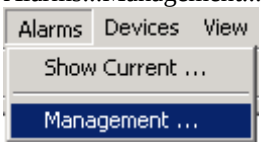
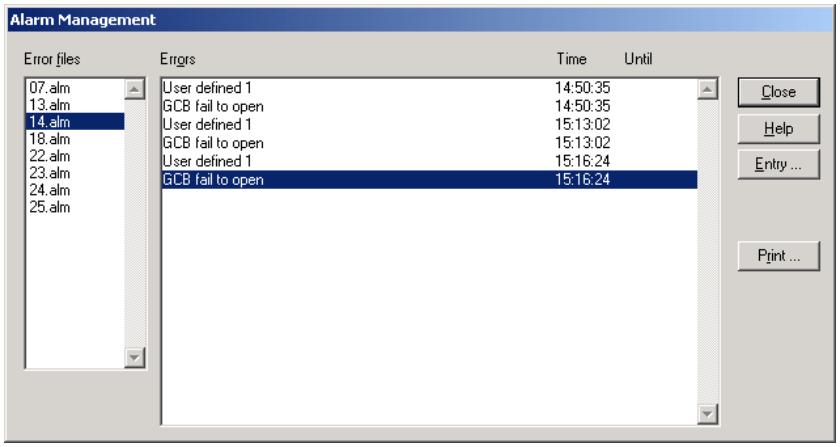


Figure 3.36
Alarm Management

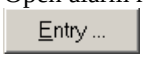


To select: Open alarm management and click on:
Desired file in the scroll menu alarm files

To print: Open alarm management and click on:

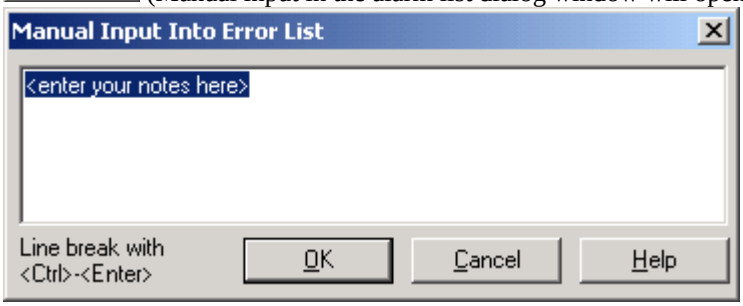
and Select the desired options in the print dialog window

To comment: Open alarm management and click on:



(Manual input in the alarm list dialog window will open)

Figure 3.37
Manual Input Into Error List



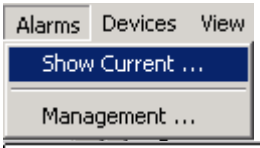
and Manually enter the desired text (line break with Ctrl +Enter)

© Woodward

Show Current Alarms

To open current alarms: Click on:
Alarms...Show current ... (“Current Alarms” dialog window will open)

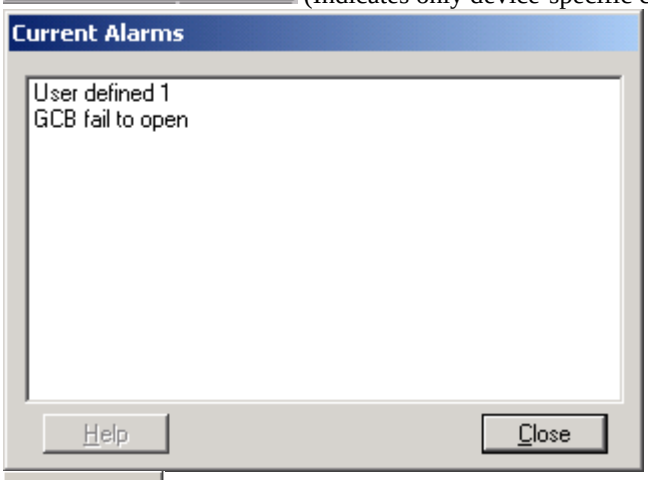
Figure 3.38
Open Current Alarms

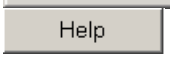


or

(Indicates only device-specific current alarms)

Figure 3.39
Current Alarms





(Shows you an explanation for the highlighted alarm)

Loading Languages

LeoPC1 can transfer to connected devices a different language. The corresponding operating instructions provide you with Information about the facilities of your devices. The following instructions provide the procedures for facilitating this function.

Components of Loading Languages

LeoPC1 provides a **Load language dialog window** for transferring a language to a control unit with the following functions:

Device to be controlled: Selection via pull down menu with the available devices

Relevant parameters: Display of:
INFO lines (displays comment lines)
xxxx lines (xxxx stands for the number code of the device parameters)

Texts to be transferred: Selection options for:
All texts (marks all texts for transfer)
Transfer language (user specified lines are transferred)

Buttons: Handling via:

Close (Closes the load language dialog)

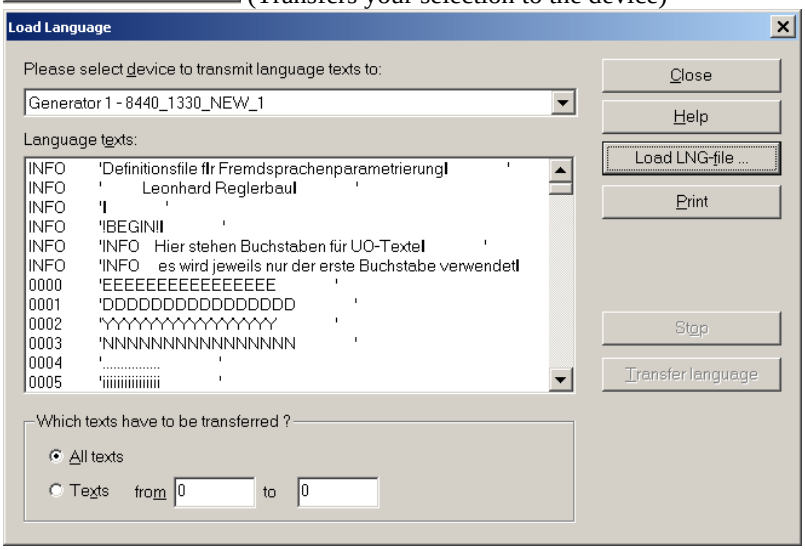
Help (Calls corresponding Help)

Load LNG-file ... (Opens the desired language file)

Print (Prints out the loaded language list)

Stop (Stops the transfer, if required)

Transfer language (Transfers your selection to the device)



 © Woodward

Procedure for Load Language

NOTE

To transfer languages to your device a connection to your plant must exist. Please ensure that no other device is connected at the same time.

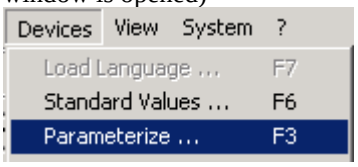
To connect: Click on:

Communication...Connector the icon (connection to the selected device will be established)

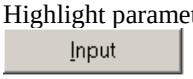
To switch clear the device: Click on:

Devices...Configuration... or the icon (the “Parameterization” dialog window is opened)

Figure 3.40
Open Parameterize

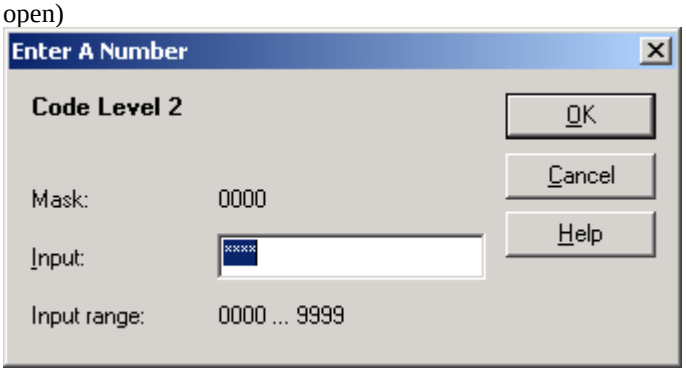


Highlight parameter "password level 2" in the list box

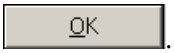


or Double click on parameter "password level 2" (input dialog window will open)

Figure 3.41
Enter Password



and Enter the password.

Verify the password by clicking on 

.

NOTE

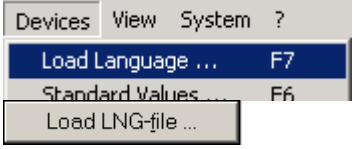
After the password has been accepted, the language can be loaded into the control unit.

Refer the to the product manual prior to attempting to transfer the language texts to ensure that all settings are correct.

To call: Click on:

Devices...Load language... or the icon

Figure 3.42
Open Load Language

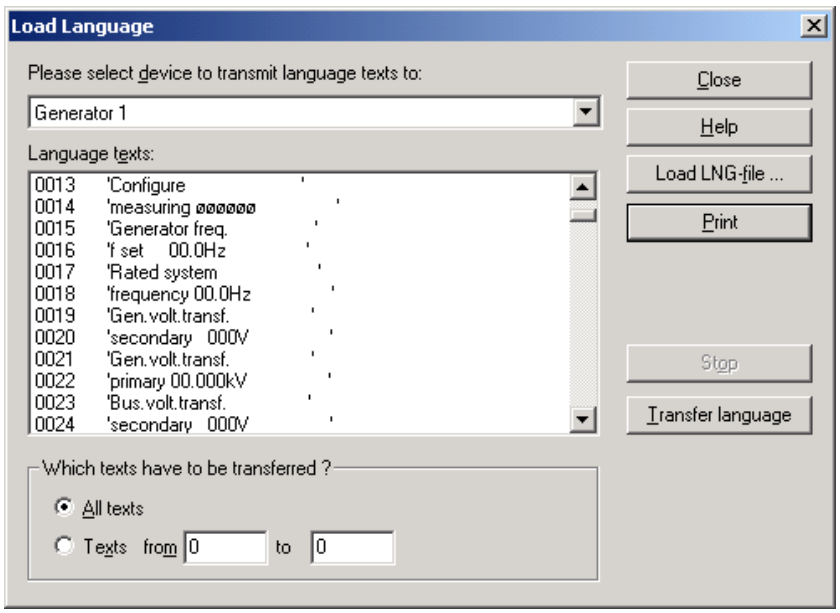


and Select the desired file from the “Open” file dialog window

NOTE

The file name must end with ".lng" and the file must have the LNG format.

Figure 3.43
Load Language



Select the desired device (pull down menu with all available devices)
The suitable language lines are displayed on the scroll menu

To transfer: Click on:
texts to be transferred All texts (all language texts are selected)
or Texts from ... to ... (enter code number range)
Transfer language (Your desired selection is transferred)

NOTE

Depending on the selection and options the language transfer can take awhile.

To stop: Click on:
Stop (Please only if it is necessary to terminate the procedure prematurely)

To print: Click on:
Print
and Select the desired options in the print dialog
OK (language texts are printed out)

To disconnect: Click on:
Communication...Interrupt or the icon (terminates the connection)

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Event Recorder

LeoPC1 can read the event recorder from the available devices. If this function is integrated, the appropriately defined events can be called up and printed out.

Components of the Event Recorder

LeoPC1 makes available to the user the reading of events or errors an **event recorder dialog window** with the following functions:

Device: Selection via the pull down menu with the possible devices
Read date: All or already read events as of the date ...
Relevant parameters: Display of:
Date on which read (only for 'Date read: All displayed)
Event/error number, date, description, value (if defined)

Buttons: Handling via:

Close (Closes the event memory dialog window)

Help (Opens Help window)

Print (Prints out the read event lists)

Delete (Deletes all previously read events)

Read (Starts reading of the event from the device)

Undo (Resets the event memory, if this function is defined)

Procedure for the Event Recorder

NOTE

To read events out of your device a connection to your plant must exist.

To connect: Click on:

Communication...Connect or the icon (connection to selected device will be initiated)

To open event recorder: Click on:

Devices...Event recorder... or the E icon (event recorder dialog is opened)

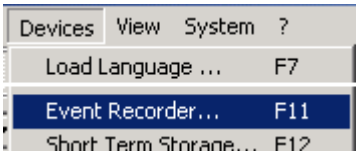
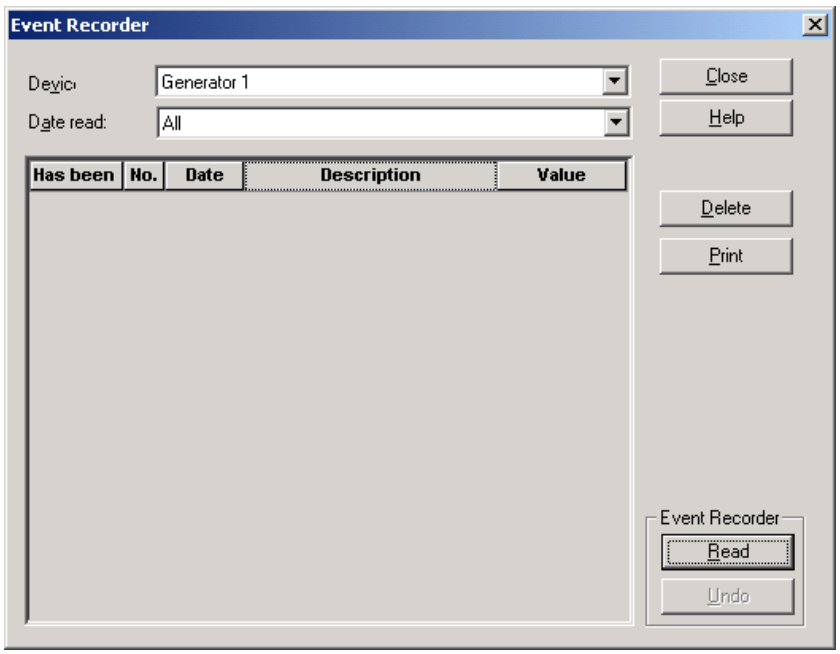


Figure 3.44
Open Event Recorder

Figure 3.45
Event Recorder



Open event recorder and click on pull down menu of:
Device: (device desired to be read)
and/or Date read: (date of event desired to be read)
and Selection of the list of all events already read.

Read events: Open event recorder and click on:

Delete (If you want to delete the displayed earlier read values)

Read (The process is started)

and Wait until the list is displayed or a prompt opens with instructions

NOTE

The read out of the event recorder can take some time depending on the device and the selected connection.

The displayed events can be filtered by using "Read Date" as long as the events have been read previously and not deleted.

To print: Open event recorder and click on:

Print

and Select the desired options in the print dialog window

OK (Event list is printed out)

To disconnect: Open event recorder and click on:

Communication...Interrupt or the icon (terminates the connection)

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Chapter 4.
Communication and Connection

LeoPC1 can communicate with other software and hardware. It has to be differentiated between the following **communication** types:

Devices Hardware that is compatible to the LeoPC1.
Applications Software compatible to CSV format such as EXCEL or ACCESS

Various drivers and a data export are available to the user for these communications and are explained in further detail below.

General Information

Hardware and software interfaces are at the center of the data communication. Correct connection, settings, and operator control are required to ensure that the communication functions correctly. Take the following information into consideration where it relates to your requirements. If there are any questions or problems, refer to the supplied documentation or contact the manufacturer of the product (e.g. modem, CAN card, cables, etc.).

Communication with Devices

LeoPC1 supplies at your disposal the drivers listed below.

Drivers for Serial Interfaces

Direct Interface

The **direct** driver of LeoPC1 provides permits the user to directly configure the control unit through a serial connection to the computer and an RJ45 connection on the control unit. The RS-232 standard for communications is utilized with this function. The device will dictate the number of functions that may be performed through this method of communication.

Gateway RS-232 Interface

LeoPC1 provides the user with the ability to utilize the **Gateway RS-232** driver. This permits the user to configure the control unit with the RS-232 standard without using an RJ45 connection. This does require the user to drive an Gateway RS-232 in the system. This method of communication assumes that all devices in the system are communicating via a CAN bus. This method of interfacing permits the user to utilize most of the properties of LeoPC1.

Modem Interface

LeoPC1 provides the user with the ability to utilize a **modem** driver. This permits the user to configure the control units via an analog modem through the RS-232 standard without using an RJ45 connection. This does require the user to drive an analog modem in the system. This method of communication assumes that all devices in the system are communicating via a CAN bus. This method of interfacing permits the user to utilize most of the properties of LeoPC1.

Components of the Drivers for Serial Interfaces

Direct Interface

Figure 4.1 Direct interface

Gateway RS-232 interface

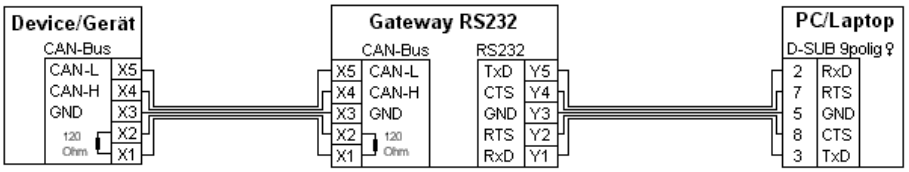

Figure 4.2 Gateway RS-232 interface

Modem Interface

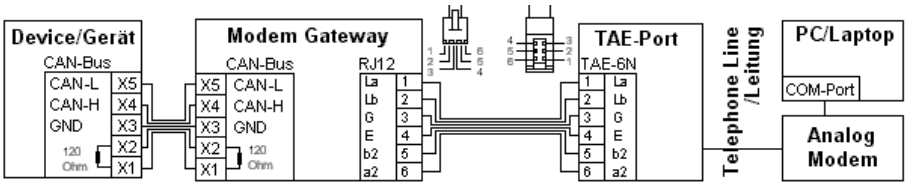

Figure 4.3 Modem interface

NOTE

These wiring diagrams are only examples. Depending on the devices, other connections may be required. Refer to the manual for the specific requirements of your device.

Procedure for Serial Drivers

NOTE

Before the drivers can be utilized, the hardware configuration of the control units must conform to the relevant circuit diagram or according to the unit documentation. Furthermore, you should check the software configuration with the aid of the steps described and, if necessary, adapt it to suit your requirements. In addition to the hardware requirements.

If the required driver is not installed on the computer to be utilized, the LeoPC1 installation program must be re-initiated and the required drivers installed. If only the demo version of LeoPC1 is available, contact your support team for assistance with obtaining the required drivers.

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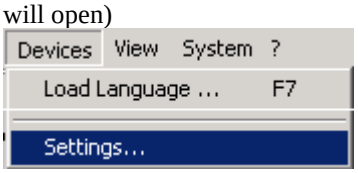
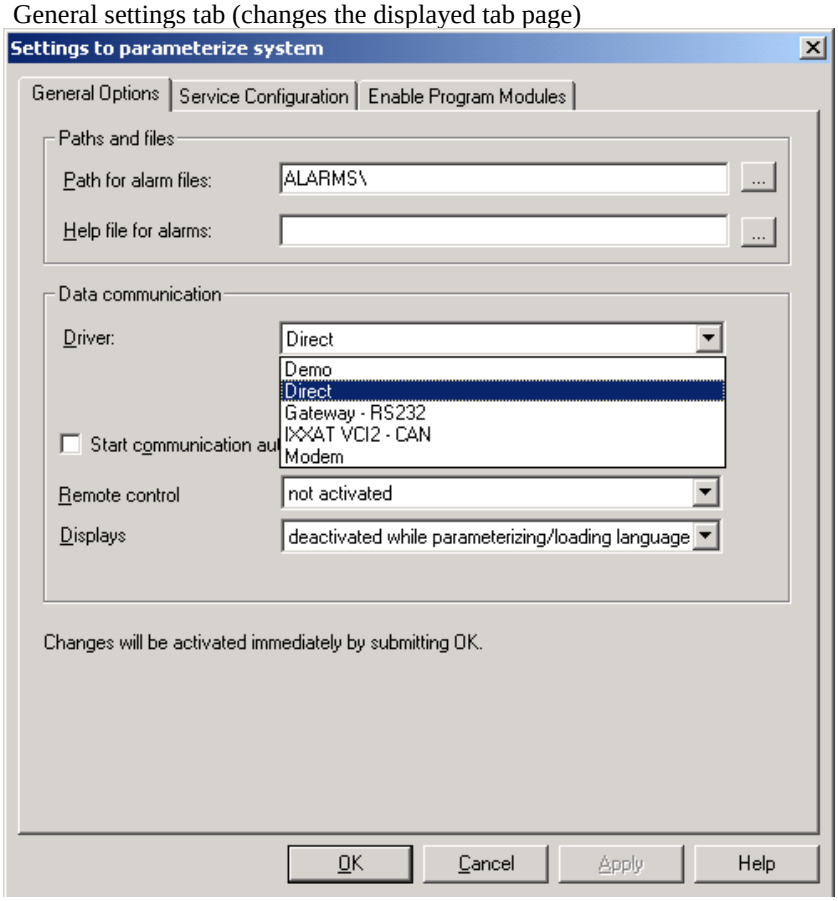
To set driver: Click on:
Devices...Settings... (The “Settings to parameterize system” dialog window will open)

Figure 4.4
Open Device Settings



General settings tab (changes the displayed tab page)

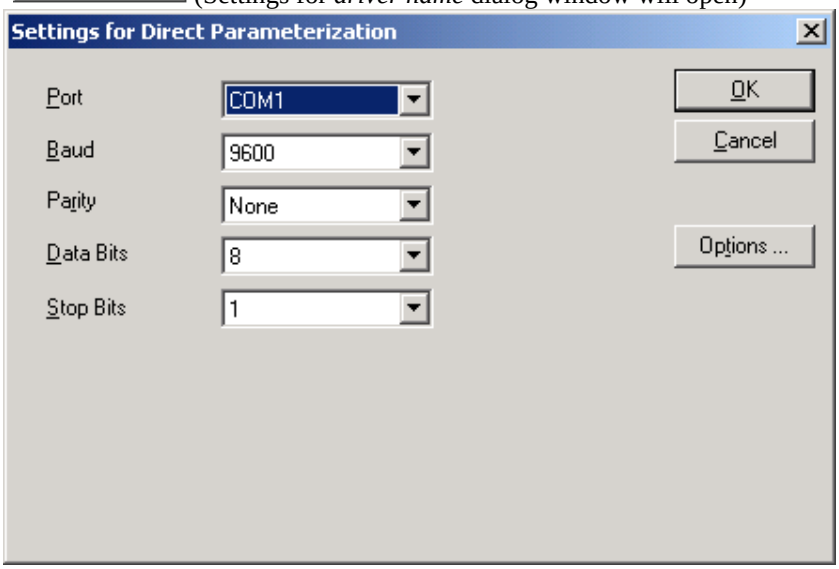
Figure 4.5
General Options



Select the desired driver (pull down menu with all installed drivers)

Settings... (Settings for *driver name* dialog window will open)

Figure 4.6
Settings for *Serial Drivers*



Possible parameters:	Port (please allocate your corresponding COM port)
Port	Select COM1, COM2 or according to PC configuration
Baud	Set the permissible transfer speed in accordance with the specifications of the hardware being utilized
Parity	Set ”None” for asynchronous transfer
Data Bits	Set ”8” for asynchronous transfer
Stop Bits	Set ”1” for asynchronous transfer

NOTE

Information about COM port assignment can be obtained via:
- Start...Settings… Control Panel...System and corresponding selection of the options.

Information about the permissible baud rate can be obtained from the device’s documentation. For example, the Gateway operates at 9,600 baud. If any problems occur, the selected driver can still be individually configured by clicking on ” Options ... **” and adapted to the plant.**

Most configuration files are have default values for the communication methods that do not required the user to modify these parameters. Only modem connections may require that the user to modify the settings according to the individual system conditions.

Depending on the driver, the user can modify the following settings in this dialog window:

Computer-related settings

Guide values: The settings specified here are guideline values that should be adapted to special situations as necessary. The values found in the parenthesis may be used for many units and are safer for use when doubt exists for what value should be entered.

Description	Direct	Gateway RS-232	Modem
Number of repetitions to send a command	3 (5)	3 (5)	0 (10)
Timeout after writing a command	0 (50)	0 (100)	500
Delay between writing a command	10 (150)	10 (150)	-
Timeout after reading an incorrect answer (CAN error)	0	0 (500)	0 (1000)
Number of repetitions to read the answer	3 (5)	3 (5)	3 (10)
Timeout for reading the answer	300 (500)	300 (500)	300 (700)
Timeout if no answer was received	100	200	200 (500)

Table 4.1 Driver settings - Serial

Flow chart: This flow chart shows you the steps LeoPC1 takes when attempting to establish communication with a device. This chart can be helpful determining what values may need to be adapted to your individual requirements.

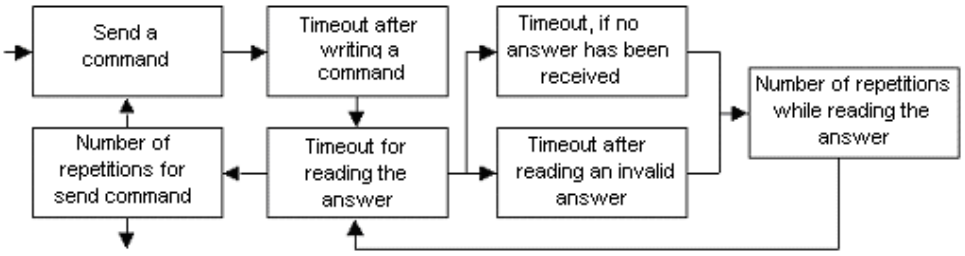

Send a command
Timeout after writing a command
Timeout, if no answer has been received
Number of repetitions while reading the answer
Number of repetitions for send command
Timeout for reading the answer
Timeout after reading an invalid answer

Figure 4.7 Driver Timeouts Handling

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Description of the flow chart:

1. When a command is written/sent, the time for **"timeout after writing a command"** and **"timeout for reading the answer"** is started. If a valid answer is received before the time expires, the next command starts or the procedure ends.
2. If an invalid answer is received, the **"timeout after reading an invalid answer"** is started. If this time expires without receiving a valid answer, the **"number of repetitions while reading the answer"** is activated and begins its cycle at **"timeout for reading the answer".**
3. If a valid answer is not received see step #6.
4. If no answer is received, the time for **"timeout if no answer has been received"** is started. If this time expires without receiving an answer, the **"number of repetitions while reading the answer"** is activated and begins its cycle at **"timeout for reading the answer".**
5. If an answer is not received see step #6.
6. If the **"number of repetitions while reading the answer"** has elapsed without a valid answer being received, the **"number of repetitions for send command"** is initiated and the procedure begins again at step #1.
7. If the **"number of repetitions for send command"** is run through without a valid answer, the procedure is aborted.

Plant-related settings

Modem Strings Description		
Initializing	Attention command	ATH (external) ATH&F0 (internal)
Connect (P/D#)	Attention command	ATDP (pulse dialing process) ATDT (tone dialing process) ATX1DT or P (internal)
Disconnect	Attention command	+++~~~~ ATH ^M
Handicap for telephone number	Enter here your standard connection (if dialing via an outside line, enter '0W' as prefix)	
Allow user to change telephone number?	Allows you to input telephone numbers other than the standard connection	
ID for connection	Attention command	CONNECT

Timeouts		
Initialization	Timeout	At least '40' seconds
Dialing process	Timeout	At least '40' seconds

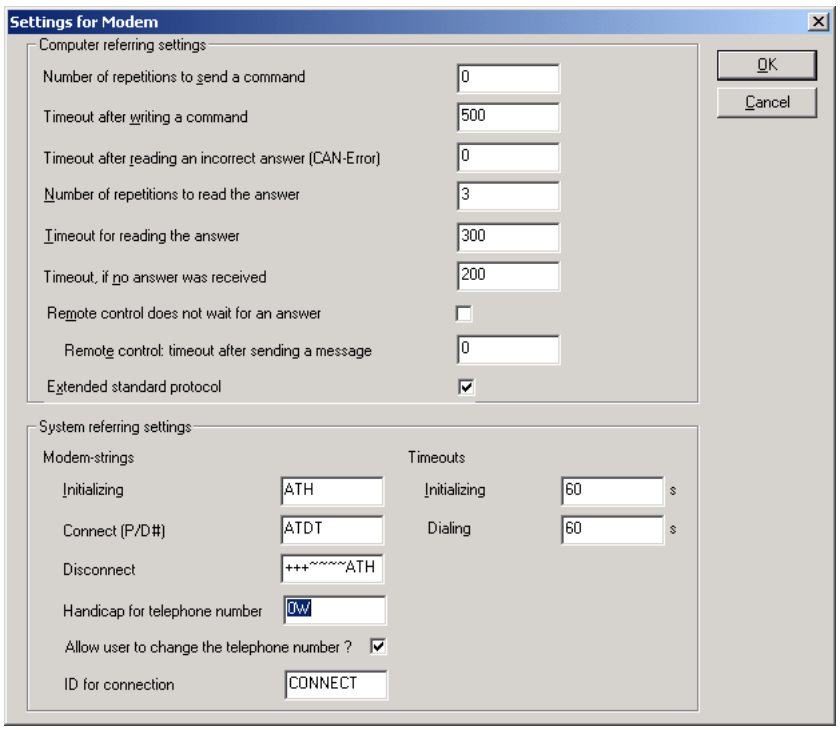
Table 4.2 Driver settings - Modem

NOTE

If you would like to establish a connection to a foreign country, it is recommended that each timeout be increased to 60 seconds or more so that the connection can be established.

If problems still occur with the connection, please refer to the operating instructions for the modem or contact its manufacturer.

Figure 4.8
Settings for Modem



NOTE

A connection to the device or devices must exist in order to use the drivers for communication. The exception to this is the demo driver. The demo driver is designed to demonstrate within certain limits the properties of LeoPC1 with requiring a connection to a control device.

When the configuration buttons are clicked on, LeoPC1 will prompt the user to initiate communication with the control unit if communications have not already been established. Communications can be specified to start automatically when the plant configuration loaded. The procedures for this are shown in the following text.

NOTE

The status for communication is displayed on the level bar by the appearance of the following icons:

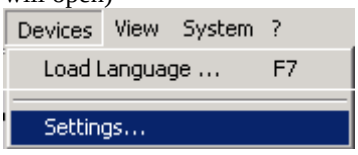
A connection does not exist.

A connection exists (display data are received).

Display data is not being received or the communication is not correct.

To set auto-connection: Click on:
Devices...Settings... (The “Settings to parameterize system” dialog window will open)

Figure 4.9
Open Device Settings



General settings tab page (changes the displayed dialog window)

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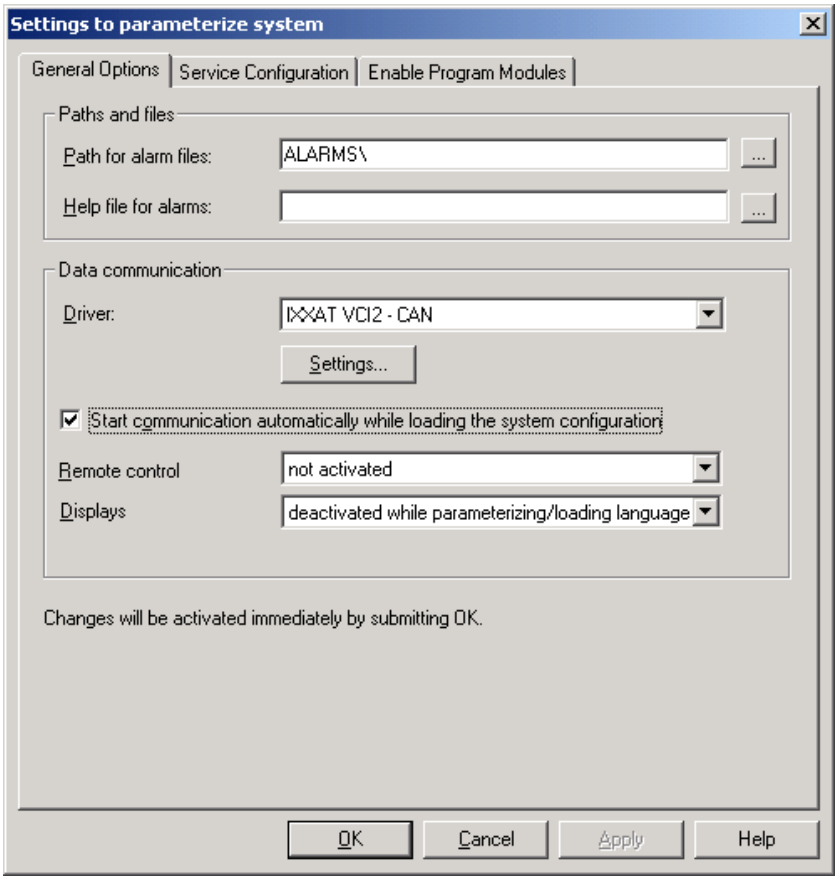
Figure 4.10
General Options



Place a check mark in the box to the left of ”Start communication automatically while loading system configuration”

NOTE

If this option is selected, LeoPC1 will attempt to establish a connection with the control unit immediately after the plant configuration is loaded. If this option is not selected, the user must start the communication.

To connect: Click on:

Communication...Connect or the icon (starts the connection to the device)

To disconnect: To open event recorder and click on:

Communication...Interrupt or the icon (terminates the connection)

NOTE

Take note of the communication parameters required or desired by the individual plant. Prior to terminating the connection ensure whether or not the connection is to be used for remote configuration or control.

Drivers for Network Cards

NOTE

LeoPC1 currently supports IXXAT products with VCI driver version 1.17 or 2.xx.

For example:

- **iPC-I 320, iPC-I 165 (ISA-PC cards)**
- **iPC-I 320 PCI, iPC-I 165 PCI (PCI-PC cards)**
- **tinCAN (PCMCIA-Interface, full support only with 'IXXAT VCI2 CAN' - driver)**
- **USB-to-CAN compact Interface (support only with 'IXXAT VCI2 CAN' - driver)**

Not all CAN-interfaces are supported by all operation systems where LeoPC1 can be installed.

It is not possible to use more than one IXXAT driver version at a time. If the IXXAT driver version 1.xx is currently installed on the PC/laptop, the user will be prompted to completely delete this file. If VCI 1.xx has never been installed or after the files have been deleted, driver version VCI 2.xx can be installed by using the LeoPC1 software installation utility.

CAN Bus Interface

By means of the CAN bus driver LeoPC1 provides the user the ability to connect the control units via the CAN bus to a PC/laptop, provided that the PC is compatible with one of the listed CAN cards. This interface permits the user's PC/laptop to be automatically connected to the plant, machines, and devices. The user can set parameters, control remotely, display, and load languages if necessary.

Components of the Network Card Drivers

You will find the **circuit diagrams** for the individual network card drivers here:

CAN Bus Interface

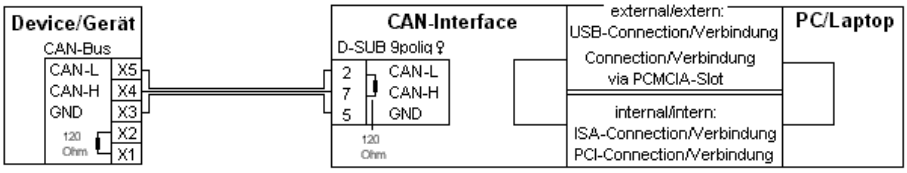


Figure 4.11 CAN bus interface

Procedure for Network Card Drivers

NOTE

Before the drivers can be utilized, the hardware configuration of the control units must conform to the relevant circuit diagram or according to the unit documentation. Furthermore, you should check the software configuration with the aid of the steps described and, if necessary, adapt it to suit your requirements. In addition to the hardware requirements

If the required driver is not installed on the computer to be utilized, the LeoPC1 installation program must be re-initiated and the required drivers installed. If only the demo version of LeoPC1 is available, contact your support team for assistance with obtaining the required drivers.

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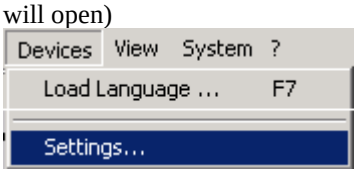
CAN Bus Interface

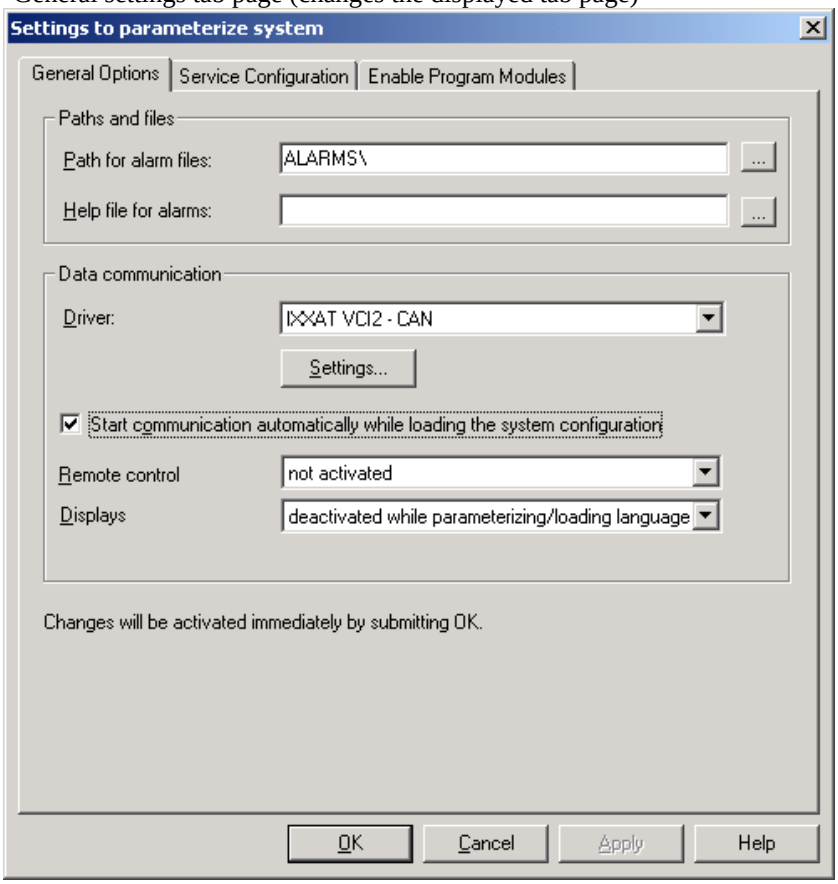
To set: Click on:
Devices...Settings... (The “Settings to parameterize system” dialog window will open)

Figure 4.12
Open Device Settings



General settings tab page (changes the displayed tab page)

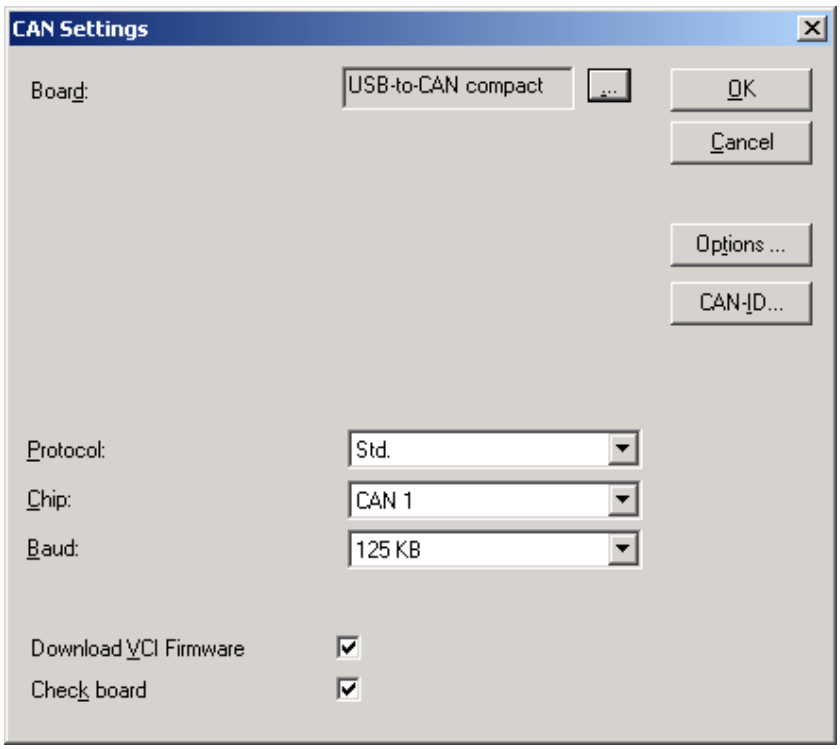
Figure 4.13
General Options



Select the CAN bus driver (pull down menu with all installed drivers)

(CAN Settings dialog window will open)

Figure 4.14
CAN Settings



NOTE

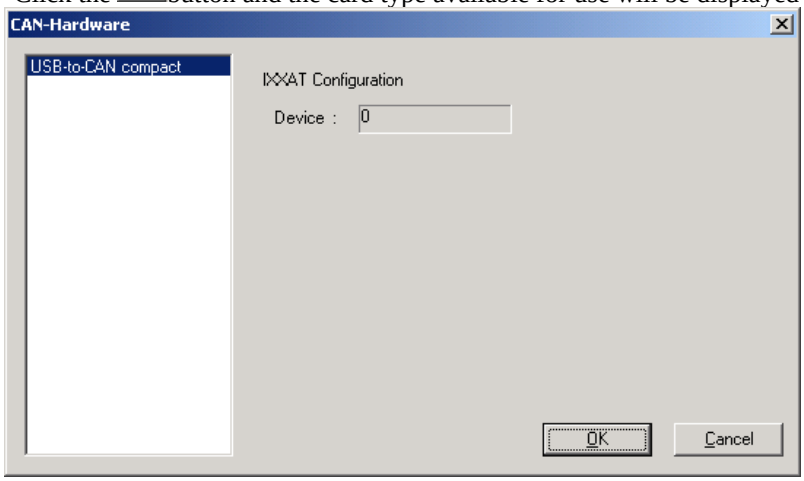
You can obtain information about the following parameters among others via:
- Start...Settings… Control Panel...System and corresponding selection of the options
The documentation for the hardware being used can provide the necessary information as well.

Setting parameters:

Board — Select, if not already automatically assigned, for:

Click the ... button and the card type available for use will be displayed

Figure 4.15
CAN-Hardware



Segment (only VCI1) — The basic address of your CAN card (VCI1-CAN driver only)
IRQ (only VCI1) — An interrupt used by the CAN card (VCI1-CAN driver only)
Protocol — The protocol that is used for communication ('Std.' is standard)
Chip — The chip that is to be used
Baud rate — The baud rate of the CAN bus

If necessary:

LPT (only VCI1) — The printer port used by the CAN card
PCMCIA (only VCI1) — The slot in which your PCMCIA CAN card is inserted
Download — A download of the VCI firmware can be effected
Card test — A card test can be performed with each communication setup

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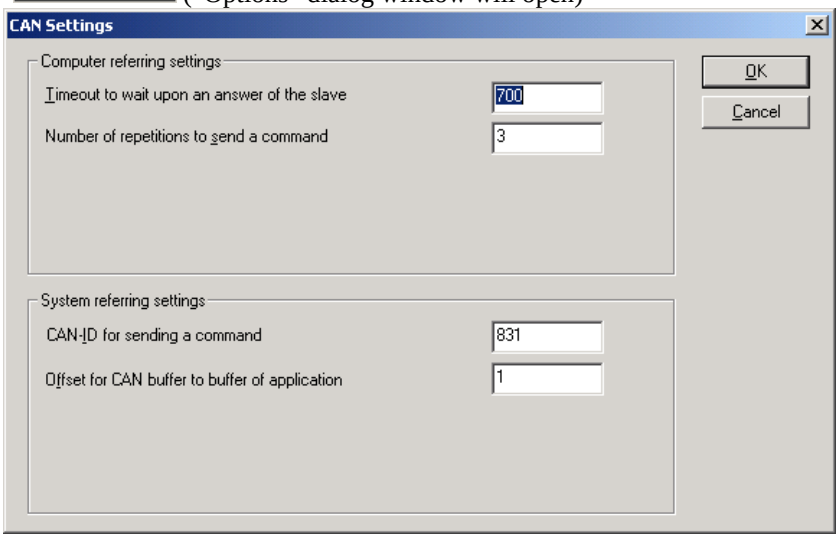
NOTE

If any problems occur, the driver can still be individually configured for your CAN card and adapted to your plant.

To adapt: Click on:

Options ... (“Options” dialog window will open)

Figure 4.16
CAN Settings - Options



Timeout — The amount of time LeoPC1 will wait for an answer to a sent command

Number of repetitions — How many times a command is re-sent to the CAN bus card after a timeout.

NOTE

The following entries require detailed knowledge of the device and protocol that is used.

CAN ID while sending — ID to be used for sending commands

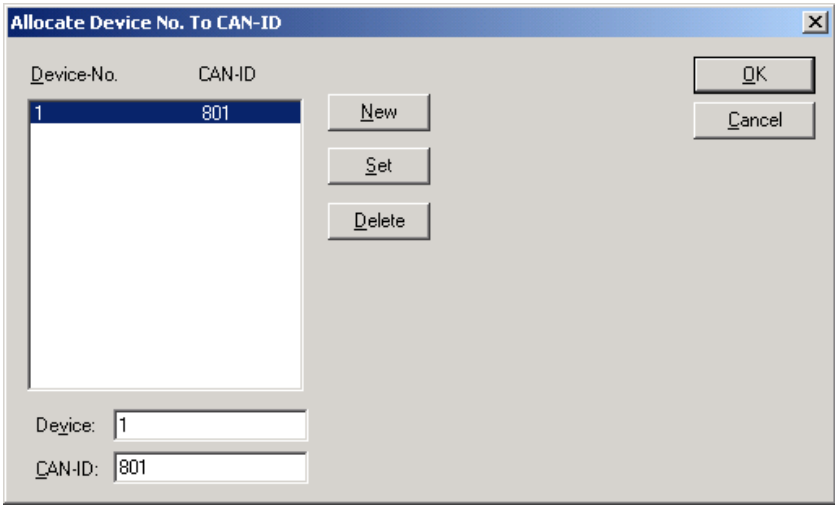
Offset CAN buffer — Offset of the data sent by the CAN bus to the internal buffer

NOTE

Select the CAN-ID... **button to change the allocation table between device no. and CAN ID no. The “Allocate device No. To CAN-ID” dialog window is opened for the purpose of managing the device no. and CAN ID allocation table. This dialog window permits the user to change or delete existing entries and add new entries by marking the desired lines, changing the required inputs, and/or clicking on the corresponding button.**

All connected CAN bus device numbers must be assigned here with LeoPC1. If no entry appears in this list box, communication via the CAN driver is not possible. CAN-IDs should not be assigned to more than one device. The CAN-ID for sending a command should not be assigned a device number.

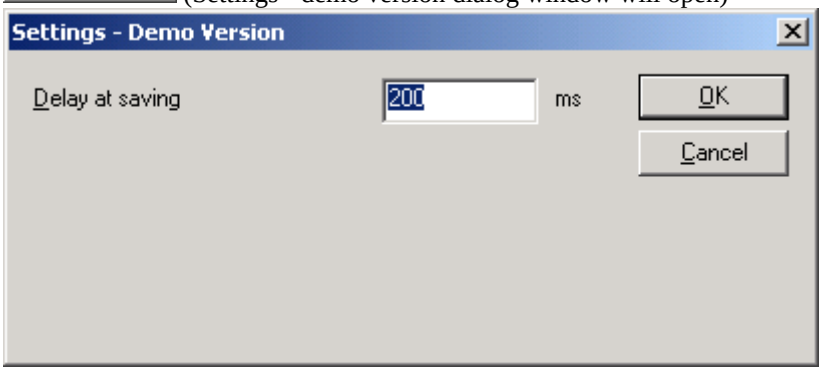
Figure 4.17
Allocate Device No. To CAN-ID



For demonstration purposes LeoPC1 displays a driver without devices being connected. Only the time delay for saving for this demo driver can be configured. No other configurations can be achieved.

To set: Click on:
Devices...Settings... (The “Settings to parameterize system” dialog window will open)
General Options tab page (changes the displayed tab page)
Select the Demo driver (pull down menu with all installed drivers)
Settings... (Settings - demo version dialog window will open)

Figure 4.18
Settings – Demo Version



Editing box: ”Delay at saving”
and Input desired time in milliseconds (ms)
OK (Settings - demo version dialog window will close)

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Communication with Other Applications

CSV Interface

LeoPC1 provides for further processing of the logging data from the "Data Logging" utility of the plant, machines, or devices for use with other applications such as EXCEL or a database like ACCESS. This is the function of the CSV interface. Only the data from one device may be stored in a file that limits the interface to only being able to display the data from on device.

Components of the CSV Interface

The CSV interface consists of a normal ASCII file in CSV format. A corresponding character separates the individual entries. This allows the files to be read and processed for use in spreadsheet programs and databases with a corresponding software interface.

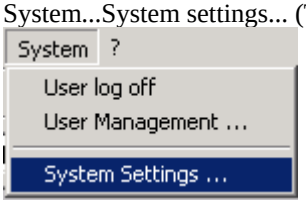
Procedure for the CSV Interface

NOTE

The user can adapt the system settings according to the plant requirements if required.

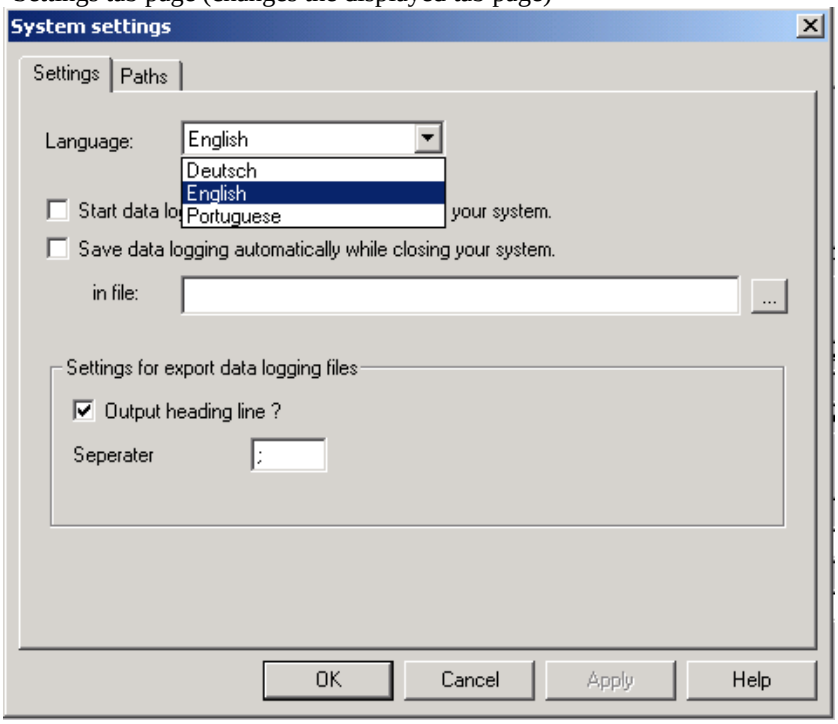
To prepare export: Click on:
System...System settings... (The “System settings” dialog window will open)

Figure 4.19
Open System Settings



Settings tab page (changes the displayed tab page)

Figure 4.20
System Settings



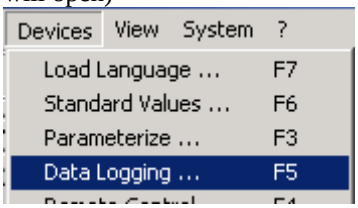
Desired option

Select or edit the following two parameters.
Output heading line? Enable by placing a check mark in the box to the left of the text.
Input Separator (a semi-colon “;” is the preferred character)

To perform export: Click on:

Devices...Data logging... or click the D icon (The “Data Logging” window will open)

Figure 4.21
Open Data Logging

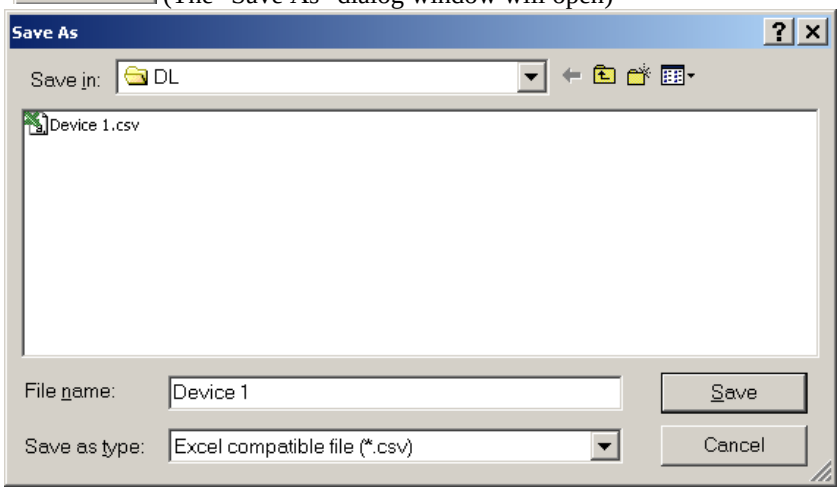


NOTE

If no data exists, refer to “Procedure for Data Logging” on page 52 and follow the user instructions in order to log and save the required data your plant.

Save... (The "Save As" dialog window will open)

Figure 4.22
Save Export



and Select from:
Editing box: "File name" (please enter the desired designation)
or Selection from the directory menu and file list
EXCEL compatible file (*.csv)

Click on the Save button (the data will be exported under the selected name)

NOTE

The exported data must be in CSV format. If the file name does not end in “.csv”, the data will not be able to be utilized in the spreadsheet program EXCEL or the database program ACCESS. By following the previous steps the user will ensure the data functions properly with these applications.

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Chapter 5.
Annex

Content of the Software Package

The software package consists of the following **file groups:**

Applications	Main.exe / Unwise.exe
Language resources	LngGer.dll (German), LngEng.dll (English), LngPrt.dll (Portuguese)
System files	System.dat (user management), Install.log/.ini (information), *.hlp/.cnt (help)
Communication drive	DrvModem.dll, DrvGW4.dll (RS-232), DrvCAN2.dll, DrvDiAc.dll (direct)
Configuration files	*.cfg (definitions), *.asm (objects), *.opt (options), *bmp (pictures)
Plant files	*.std (standard values), *.llo (loggings), *.csv (export), *.alm (alarms), *.dat (event recorder), *.lng (load language)

NOTE

The list below may have some missing information or information duplicated in it.

Directories and Designation of the Installed Component Files

Application	**%Main directory%**			
	Main.exe	Unwise.exe	**Alarms***.*alm*	
	Install.ini	Unwise.ini	**Dl***.llo und *.csv	
	MainUtil.ocx	System.dat	**Lng***.lng	
	LngGer.dll	LngEng.dll	**PICTURES***.bmp	
	LngPrt.dll	ReadMe.txt	**Std***.std	
	HelpGer.hlp	HelpGer.cnt	**TOOLS***.asm und *.opt	
	HelpEng.hlp	HelpEng.cnt		
	Bckgrnd.bmp	prnLogo.bmp		
Demo/Direct	DrvDemo.dll		DrvDiAc.dll	
Gateway RS-232/Modem	DrvGW4.dll		DrvModem.dll	
CAN-Bus (VCI1/VCI2)	DrvCAN1.dll		DrvCAN2.dll	
CAN components	**%System%** (C:\WINDOWS\SYSTEM or YSTEM32)			
General	Cci14c26.dll	Xacdyapi.dll	Uci20cci.dll	Xatisahw.dll
	Cci14t26.dll	Drvrapi.dll	Cci31dp6.dll	Xat11reg.dll
	Cci14dp6.dll		Cci31usb.dll	Xat12c16.dll
	Cci14i46.dll		Cci16dp6.dll	Xat24dp6.dll
	Tca_32.dll		Cci16c26.dll	Vci11unb.dll
	Pciacc32.dll		Axhost.dll	Vci_w32.dll
	Vci_w32.dll		Xatinst.cpl	Drivers\
WinNT	Xatpcikl.sys	Cndy.reg		Xat12c1.sys
	Xatcdykl.sys	Tincanv2.reg		Xat24dp.sys
	Mpmi2e.sys	Xatpcikl.reg		Xat10d25.sys
Win98 and)	Xatcdy.vxd	Mpmi2e.vxd	Inf\	xat20u23.sys
Win2000/XP (VCI2 only)	xat10c16.dll	xat11dp6.dll	Xatusb.inf	Xat10u23.sys
	xat12pc6.dll	xat11c1.vxd	Xat_pci.inf	Xat10d24.vxd
	xat40t16.dll	Xat22dp.vxd	Xat_pcm.inf	Xat24dp.vxd
	vci11un6.dll		Xat_isa.inf	Xat12c1.vxd
System components	Msvcp60.dll	Asycfilt.dll	Comctl32.ocx	
	Msvcrt.dll	atl.dll	Comdlg32.ocx	
	Msvcirt.dll	Dao350.dll	Comcat.dll	
	Msvbvm60.dll	mfc42.dll	Olepro32.dll	
	Msstkprp.dll	Stdole2.tlb	Oleaut32.dll	

Table 5.1 Component files – Installation

NOTE

The graphs and pictures (*.bmp) supplied can be altered with a standard image-editing program (CorelDraw, Microsoft® Paint, etc.).

The configuration files (*.cfg and *.asm) can be edited with a standard text editor (such as Microsoft®WordPad, Microsoft® NotePad, MultiEdit, etc.)

Registration Data Base

Settings in the registration database can be computer-dependent or user-dependent. The following two segments list entries that are present in the registration database. The specified values are installed as default values, which, if necessary, may be changed during the application.
Other entries may be changed, if necessary, during use of the application.

Computer-dependent [HKEY_LOCAL_MACHINE\Software\]

NOTE

The export, data logging, and system modules are comprised of code that can be configured through LeoPC1.

Application	%Main key%
Default background	"LogoBitmapFile"="Bckgrnd.bmp"
Display of splash in ms	"SplashTime"=dword:00000bb8
Aktive language	"Language"="Deutsch"
Output of export header	"ExportHeader"=dword:00000001
Active separator symbol	ExportSeperatorKey"=";"
Autostart Short-term storage	"STSAutostart"=dword:00000000
Autostart data logging	"DataLoggingAutostart"=dword:00000000
Autosaving of data logging	"DataLoggingAutosave"=dword:00000000
Active backup file	"DataLoggingAutosaveFile"=""
Time period parameter X	"DataLoggingXSetting"=dword:00000001
Start time	"DataLoggingXStart"=dword:00000000
End time	"DataLoggingXEnd"=dword:0000012c
Measured value parameter Y	"DataLoggingYSetting"=dword:00000000
Minimum value	"DataLoggingYStart"=dword:00000000
Maximum value	"DataLoggingYEnd"=dword:00000320
Sampling rate	"DataLoggingRate"=dword:00000002
Logging time period	"DataLoggingTime"=dword:0000012c
0=zero, 1=file, 2=window	"CfgSyntaxCheck"=dword:00000000
File name	"CfgSyntaxcheckFile"="syntax.log"

Table 5.2 Registration Software keys – Main

NOTE

Code comprises all installed languages, their dynamic configuration value, and the relevant assigned help file. The user can select the desired language from the “Load Language” dialog window in LeoPC1 from all available languages.

Application	%Sub key%
Languages	"Deutsch"="LngGer.dll,0"
	"English"="LngEng.dll,1"
	"Portuguese"="LngPrt.dll,2"
\Helps	"Deutsch"="HelpGer.hlp"
	"English"="HelpEng.hlp"
	"Portuguese"="HelpEng.hlp"

Table 5.3 Registration Software keys – Language and Help

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NOTE

The directory variables are comprised of code. These variables can be used in the CFG files when the bit maps or configuration files are specified. The settings can be edited through LeoPC1 under System Settings...Paths tab page.

Application	%Sub key%
\Environment	"ASM_PATH"="*main directory*\Tools"
	"BITMAP_PATH"="*main directory*\Pictures"
	"LNG_PATH"="*main directory*\LNG"
	"STD_PATH"="*main directory*\STD"
	"DL_PATH"="*main directory*\DL"
\DL	\Value0
	\...
	\Value7

Table 5.4 Registration Software keys – Environment and DL

NOTE

The individual communication drivers are comprised of code. The driver list contains all configured interface drivers. New interface drivers are automatically entered in this list when installed. Additional plant-specific files may be found in the CFG files.

Application	%Sub key%
\Drivers	"Demo"="*main directory*\DrvDemo.dll"
	"Direkt"="*main directory*\DrvDiAc.dll "
	"Modem"=" *main directory*\DrvModem.dll "
	"Gateway RS-232"="*main directory*\DrvGW4.dll "
	"IXXAT VCI2–CAN"="*main directory*\DrvCAN2.dll "
\DrvDemo	"Timeout"=dword:000007d0
\DrvDiAc	"Port"=dword:00000001
\DrvGW4	"Port"=dword:00000001
\DrvModem	"Port"=dword:00000001
\DrvRS-232	"Port"=dword:00000001
\DrvCAN	*Entries are dependent on the driver version and the hardware that is installed.*

Table 5.5 Registration Software keys – Drivers

NOTE

Further entries are achieved under [HKEY_CLASSES_ROOT], [HKEY_USERS\Software\], and [HKEY_USERS\.DEFAULT\Software\]. These are used for internal application functions. If necessary, they can refer to other codes.

FAQ

Listing of Selected Error Messages

Error number	Description
-1	Unknown error
-13	COM-Port is not connected/available
-15	Error while modem initialization
-16	Error while connecting (modem)
-123	Wrong device/communication-ID
-232	Access to device was refused: wrong module was selected, Password is missing/wrong, etc.
-1009	VCI (CAN) was canceled
-1011	VCI (CAN) was disconnected
-1012	CAN bus buffer overflow
-1013	CAN bus did not answer

Table 5.6 FAQ – Error descriptions

No faults are logged in an Error File.

If new files are not created, the user can check this by adding a manual entry. If this is not possible, check whether the directory that is entered in the device settings actually exists.

The Data for Data Logging is stored in the Swap File and not in a Normal File.

Please check whether there is a subfolder named DL in your folder containing the configuration file. If not, create this folder, as the data logging files are stored here. If this folder does not exist, the data logging files will be stored in the swap file.

The PC has crashed. Is my Logging Data now lost?

A special logging procedure ensures that the data is not lost, even if the computer crashes. Start up the PC and restart LeoPC1. The data will be available until data logging is restarted.

Driver Settings are reset again and again.

Ensure that the CFG file is not write-protected. If the CFG file is write protected, disable the write protection since some of the settings are managed in the CFG.

Why is the Logo of the LeoPC1 not printed out?

Check if the cfg file was loaded from the mains directory. If it was opened from another directory, then the suited logo file ("prnLogo.bmp") must be stored there. The file is in bmp format and has the following size: width: 308 pixel, height: 86 pixel.

Starting the Configuration the Message appears: "File not found *.opt"

The required *.opt file is expected to be located in the sub directory ”Tools”. It must be in the same directory as the cfg file, which has to be opened. For example the *.cfg file is located in:
" C:\Program Files\Woodward\LeoPC1\cfg ", then the *.opt file is expected to be located in:
" C:\Program Files\Woodward\LeoPC1\TOOLS ".

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Is Communication possible via COM Interface (direct, Gateway RS-232), if the Laptop/PC doesn't have a (free) COM Port?

It is possible to configure a COM port over a USB interface with compatible hardware and software that can be utilized by LeoPC1.

You cannot configure!

Problem 1: Neither reading nor writing is possible

Problem A:	**Error sources on the devices side:**
Question 1	Is the parameter "Direct para" in the device configured "ON" for direct drivers
or	"OFF" for all other communication drivers? (Modem, Gateway RS-232, and IXXAT VCI2 – CAN)?
Question 2	Are the connections for the PC, direct parameterization (DPC) cable, and the device good? If necessary test with a different DPC cable!
Question 3	Is an extension cable being used? Check the polarity to ensure the input pins are connected to the correct output pins.

Problem B:	**Error sources on the software side:**
Question 1	Have you selected the correct driver for your configuration? If it's INCORRECT, select the correct driver.
Question 2	Is the correct COM port configured in the driver settings? Ensure the correct COM port being utilized is the same as the COM port configured in the driver settings.
Question 3	Is any other software using the COM port? Close the software application that is using the COM port so LeoPC1 may start communications. The COM port can only be utilized by one application at a time.
Question 4	Are the communication timeouts configured correctly? Use the guide values in the driver settings (it is better to set higher values if doubt exists whether the configured time is too short).

NOTE

Modem connections from LeoPC1 must comply with the operating instructions for the modem being utilized. Other AT commands may result from this pre-specified as defaults.

Problem 2: Reading is possible, but writing not.

Problem B:	**Error sources on the software side:**
Question 5	Has the correct password been input via LeoPC1? If not, input the level 2 code in the device.
Question 6	Are the expected password and the input data correct? If not, input the correct password and/or data.

Problem 3: Reading and writing of individual parameter values possible via input, but parameters are not being read when "Read All" is used.

Problem B:	**Error sources on the software side:**
Question 7	Are the formatted values readable? If not, the problem most likely is with the device.

NOTE

It is recommended to establish communication with a control device via the "Parameterization" dialog window to perform a readout of the parameters and storage of the STD file rather than producing an STD file offline that will be loaded into a control unit at a later date.

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How to Contact Woodward

Please contact following address if you have questions or if you want to send a product for repair:

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Fax: +49 (0) 711 789 54-100
E-mail: sales-stuttgart@woodward.com

For assistance outside Germany, call one of the following international Woodward facilities to obtain the address and phone number of the facility nearest your location where you will be able to get information and service.

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Internet Download of the Software

The latest version of the LeoPC1 you can download from the following internet page **www.woodward.com/software/Software.cfm** and select LeoPC1 from the list right there.

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- Field service during commissioning

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2007/9/Stuttgart